

the [19185] Pennsylvania Railroad in Pennsylvania, plus 10 per cent, which demands you assumed all took place at the time of the area 6 system peak in 1946, right? A. The demands of P. P. & L., P. E. and M. E. Companies did take place or were reported to have taken place at the time of the system peak. For the railroad company, an average of the three highest is used, but is not one specific peak and only one of the three that I averaged, I believe occurred at the hour of system peak.

Q. Well, I think you are right. In any event, the figure of 36,557 kw appearing on line 14 of Table V-A of Exhibit 421 is not the actual peak demand of the railroad company in Pennsylvania during the time of the area 6 system peak. Am I right? A. Yes.

Q. Now, that area 6 system peak occurred at 6 p.m. December 19, 1946, right? A. That is correct.

Q. And that is shown on Exhibit 372, one of Mr. Spaulding's exhibits, is not that right? A. That is correct.

Q. Do you know what the actual demand of the Pennsylvania railroad was at 6 p.m. on December 19, 1946 limited to Pennsylvania? If I show you Exhibit 372, will that refresh your recollection any? [19186] A. The actual measured demand of the railroad in Pennsylvania at that hour is reported as 24,000.

Q. Kw? A. Yes.

Q. Now, Mr. Davis, if the actual Pennsylvania Railroad load in Pennsylvania at the time of the area 6 system peak at 6 p.m. on December 19, 1946 had actually been 36,557 kw—that is, 12,557 kw higher than the 24,000 we have just referred to—would not the load shown on your Exhibit 425 have been higher by 12,557 kw on that same peak hour?

THE WITNESS: That is probably true.

By MR. MYSE:

Q. In other words, you should have made the same adjustment or a similar adjustment to the adjustment you

made for the Metropolitan Edison requirements, is not that right? A. No, I do not believe that is comparable. The use of the 36,557 as an average load there is due entirely to the character of the railroad load. When you are taking some hour that is determined without any relation to the railroad load, you might at one time get a high peak and at another time a low at that particular hour, which is recognized in the method of billing the railroad company, and I think a more [19187] representative demand for the railroad company at that hour is obtained by using this average.

Q. Well, in using the figure of 36,557 kw, don't you assume that that is the average peak that the railroad demands on the Holtwood-Safe Harbor system during the peak week of the area 6 system peak? A. I am using that as a portion of the capacity required to serve those loads.

Q. Now, actually what you have done on Table V-A is deducted this estimated load of the railroad in Pennsylvania from what you found to be the dependable capacity at the time of the area 6 system peak, is not that right?

A. That is correct.

Q. Now is it not a correct statement to say that if you had used that estimated peak load of the railroad in Pennsylvania instead of the actual peak load of the railroad in Pennsylvania at the time of the area 6 system peak in determining your dependable capacity, you would have come out with a higher figure for dependable capacity, is not that right? A. That is right, if it had been determined that way.

Q. And that higher figure would be 262,557 kw, is not that right? [19188] A. At that particular time, that is right.

Q. And correspondingly, the net dependable capacity available for load in line 9 of column 4 of Table V-A would be 242,773 kw, is not that right?

THE WITNESS: If we added 12,557 onto that, that would have been 242,773.

By Mr. MYSE:

Q. And correspondingly if there were no changes in the figure of 153,512 kw shown in line 15 of Table V-A, the figure of 102,488 kw would be increased to a figure of 115,045 kw, right? A. If you add the 12,557 to the 102,488 that is what you would get.

Q. Now, as I understand your exhibit, table V-A of Exhibit 421, Mr. Davis, the firm loads of the Pennsylvania customers during the time of the area 6 system peak which you show in lines 10 to 12, inclusive, and summarized at line 13 to a total of 103,000 kw, are the firm loads which you assume would be incurred under conditions of most adverse river flow of record, is that right? A. Those are the firm loads that are reported actually did occur in 1946.

Q. During the time of the area 6 system peak? [19189] A. Yes, sir.

Q. Would those same firm loads occur under conditions of most adverse river flow of record? A. I do not know of any reason why the loads of these customers would have been changed by minimum flow conditions so long as the M.E. steam line remained as it was at this hour.

Q. Well, you assume; then, that there would be no change under adverse-flow conditions, right? A. I see no relation between these loads and river flow.

Q. Well, is not that your assumption that there would be no change? A. That is true.

[19190] Q. Under the method you pursued in Table V-A of Exhibit 421, is it not a fact that you assumed that 74.85 per cent of the 104,000 kw which you show as the installed capacity in column 2, line 1 of Table V-A is dependable capacity?

[19191] A. That is what it seems to work out.

Q. And that means, does it not, that approximately 75 per cent of the 80,000 kw of 25 cycle capacity at Holtwood you also assumed to be dependable capacity, right? A. I did not make any distinction between 25 and 60 cycle.

Q. Well, is not that implicit in your method that approximately 75 per cent of the 80,000 kw of 25 cycle capacity at Holtwood is dependable capacity? A. That would be a logical conclusion.

* * *

[19192] Q. But under the method you have pursued, the net result is that you have allocated no capacity to Baltimore! A. Right.

Q. That means, does it not, that you are saying and you are assuming that Baltimore uses none of the capacity of Holtwood? A. I am assuming there is no dependable capacity of Holtwood left for Baltimore after the requirements of the Pennsylvania customers are supplied.

Q. Well, does not that mean, Mr. Davis, that you assumed under the method you pursued that there is no dependable capacity of Holtwood used by Baltimore Co.?

MR. GOLDBERG: What do you mean by "used"?

TRIAL EXAMINER: You may answer, Mr. Witness.

THE WITNESS: The dependable capacity which I have determined in accordance with the method shown in Table V-A is more than used up in supplying the obligations of Holtwood [19193] in Pennsylvania.

Q. I have not asked you that, Mr. Davis, if you will read the question.

THE WITNESS: I assumed that there was no dependable capacity as determined by this method that Baltimore could depend on. Baltimore uses capacity when the water is up, when conditions are good; but that is not dependable capacity.

[19195] Q. Mr. Davis, referring again to your Table V-A of Exhibit 421, as I understand it, your purpose in going through the calculations you did go through on that table, to get the figure of 102,488 kw, as the balance available to Baltimore from Holtwood and Safe Harbor, was to obtain the balance of dependable capacity available to Baltimore under most adverse flow conditions of record, from the Holtwood and Safe Harbor developments; is that right?

A. One component of that is the load-carrying capability under most adverse conditions, which is modified by the addition of the 33,000 for some other factors or more capacity at times other than minimum flow, but the calculations have been gone through to obtain the balance available to Baltimore under the conditions which I have explained.

[19196] And those conditions are most adverse flow conditions of record; is that right? A. The basic load-carrying capability of 167,000 under most adverse flow conditions of record.

Q. Now, in order to arrive at that figure of 102,488 kw, you deducted the firm loads plus 10 percent of the Pennsylvania customers, plus the amounts you deducted for the Pennsylvania Railroad in Pennsylvania, on the assumption that those obligations, in terms of firm loads and Pennsylvania load in Pennsylvania, would obtain during most adverse flow conditions; is that not right? A. I attempted to develop the capacity that could be depended upon to carry those loads.

Q. Mr. Davis, can you tell me whether my statement is correct or not? A. Not quite.

Q. What is there that is incorrect about my statement? A. It is a little too narrow.

Q. In what respect? A. I was just about to tell you.

Q. All right, if you will, please.

TRIAL EXAMINER: Proceed.

A. The capacity which I have developed as dependable is the capacity that can be depended upon to carry those loads when they occur.

[19197] By MR. MYSE:

Q. Now, if they would not occur during adverse flow conditions, then, you should make some adjustment for that fact; is that right? A. Well, I have made some adjustment for probability of better than adverse flows in a part of the 55,000 kilowatts which I have added.

Q. Well, have you made any adjustment, however, to the firm loads plus 10 per cent of any of the Pennsylvania customers for the fact that under adverse flow conditions Holtwood and Safe Harbor might not be obligated to furnish the actual firm loads at the time of the Area 6 system peak? A. I think I testified just before lunch that these were the actual peaks of the three customers, without adjustment.

Q. You are familiar with Exhibit 76, I take it, which is the contract between Pennsylvania Water and Power Company, Safe Harbor Water Power Corporation, on the one hand, and Pennsylvania Power and Light Company, on the other; isn't that right? A. Yes.

Q. As I recall from our cross-examination on Exhibit 64, you are also familiar with Section 2, Art. IV thereof, which defines the obligation of the generating companies, that [19198] is, Penn Water and Safe Harbor, during on-peak periods of days of low flow; is that right? A. You mean their obligations under an option?

Q. Well, Section 2 defines the obligations of Penn Water and Safe Harbor during the on-peak periods of days of low flow; isn't that right?

A. That is right.

Q. And it defines that obligation to be only 80 per cent of the Lancaster load requirements; isn't that correct?

A. That is what is defined there: "Generating Companies may at their option reduce their supply to Receiving Company to 80% of the Lancaster Load Requirements. ***"

Q. And there is a similar provision in Section 3, is there not? A. That is right.

Q. And Section 3 also defines on-peak periods, and I won't trouble you to read it into the record, because the exhibit is in the record, isn't that right? A. That is right.

Q. And it also defines what are days of high flow and days of low flow; isn't that right? A. That is correct.

Q. In Exhibit 77, which is a supplement to Exhibit 76, there appear certain options; isn't that correct? [19199] A. That is true.

Q. And one of the options is to continue to operate under the provisions of Sections 2, 3, and 4 of Article IV of Exhibit 76; isn't that correct? A. That is right.

Q. And that is Option A? A. Option A; correct.

Q. Do you know at this time whether or not Option A is in effect? A. I understand that it has been in effect since early this year.

Q. And if you will refer to transcript 16636, line 12, which is part of Mr. Spaulding's testimony on direct or rebuttal, to refresh your recollection, it went into effect on February 15, 1947; isn't that correct? A. That is as I remember it, and that is what it says.

Q. With that option in effect, the fact is that whatever firm loads there are of Pennsylvania Power and Light, only 80 per cent of that firm demand is an obligation of Penn Water and Safe Harbor during adverse flow conditions; isn't that correct? A. I had understood that during 1946 there was no option in operation.

Q. Well, we will get to that, Mr. Davis. Will you answer my question? [19200] A. At the present time, that is true.

Q. That is true at the present time, is it not? A. Yes.

Q. In order that your Exhibit 42f may be applicable to the year 1947 and the future, you would have to take into consideration that reduction in the obligation of the peak demands of the Pennsylvania Power and Light Company under most adverse flow conditions, would you not? A. Well, if we could take into consideration also the actual de-

mands at that time, so that, if they should happen to increase 20 or 25 per cent, the 20 per cent reduction could be applied to the proper figure, that would be right.

Q. In other words, whatever the actual demands would be in the future, you would have to take only 80 per cent of those demands in working out your calculations; isn't that true? A. That is true.

Q. Is it your testimony that the demands that you show at line 10 of Pennsylvania Power and Light, or any of the firm load demands which you show at lines 10, 11, and 12 of Table V-A of Exhibit 421 cannot be used as the criterion for the demands of the future? A. No, I wouldn't say that you could use those as criterion for the demands of the future. When you come to [19201] use those for allocating costs, it doesn't mean that the company's revenue would be confined to these demands, if they should increase, or if they should decrease.

[19211] Q. Now, it is true, is it not, Mr. Davis, that the backfeed that Penn Water receives from Baltimore Company is a resource of Holtwood's which may be used for serving any of its customers, isn't that right? A. That is a resource which I have distinguished from—

Q. Well, now, Mr. Davis, I haven't asked you how you distinguished it. You have answered my question. It is a resource, is it not?

TRIAL EXAMINER: For what?

MR. MYSE: For use of any of Penn Water's customers. Isn't that right?

THE WITNESS: Sure, it is a supply by Baltimore to [19212] increase the resources of Holtwood's own plant.

By MR. MYSE:

Q. Likewise the interchange purchases by Penn Water or Safe Harbor are resources to them which may be used in serving their customers; isn't that correct? A. That is true.

Q. To the extent, then, that you have not included Baltimore backfeed and interchange purchases in the figure which you show at line 3, column 3 of Table V-B, of Exhibit 421, you have not included all of the Holtwood resources in that line; isn't that correct? A. I have included all—
[19213] Q. Now will you answer my question, please? I haven't asked you what you have included. I have asked you whether or not you have included all the resources of Holtwood in that particular line. A. I have.

MR. HALL: Mr. Myse, will you define what you mean by "resources"? Are you using that term in any different way than he has used it in connection with Table V-B?

MR. MYSE: Whatever way the witness has been using it.

THE WITNESS: The way I have been using it, Holtwood's resources are included in line 3.

By Mr. Myse:

Q. Then were you saying that Baltimore backfeed is not a resource of Holtwood, as you used the term "resources"? A. I used the term "Baltimore supply" for that backfeed, and I included—

Q. Well, now, will you answer my question, please? I haven't asked you where you have included it. A. I have not so interpreted it.

Q. You are now saying that the backfeed from Baltimore is not a resource of Holtwood as you use it. Is that your testimony? A. As I have used the term "Holtwood resources," it is not.

Q. Likewise, you are now testifying under oath that the [19214] interchange purchases that Penn Water receives are not a Holtwood resource, as you used the term? A. I have not so treated it.

[19215] Q. That figure of 615,636 mwh., which you label the balance of Holtwood resources, I take it we are to under-

stand that when you speak of Holtwood resources, there, you mean Holtwood resources as you have defined them a few moments [19216] ago—as excluding the backfeed from Baltimore and the interchange purchases? A. That is right.

Q. Where did the figure of 157,961 mwh. come from, which appears in line 8 of Table V-B, Exhibit 421 and is labeled "Backfeed on 220 kv. lines"? A. That comes from Form 1 report.

Q. Can you tell me where you got it from, in the Form 1 report? A. We used to get it in the Form 1 report, but it doesn't seem—

Q. As a matter of fact the Form 1 report, on Schedule 552, page 524, shows that the amount of interchange power received from Consolidated Gas Electric Light and Power Company is 159,482 mwh., or 159,482,000 kwh.; isn't that correct?

TRIAL EXAMINER: Received from Baltimore?

MR. MYSE: It doesn't say so. That is the total on both lines, is it not—220 kv. and 66 kv. Isn't that correct?

THE WITNESS: No. That is the total on the 220 kv.

By MR. MYSE:

Q. Where did you get the figure 157,961, then? A. I guess you are right. The 159,482 mwh. is the backfeed on the 220 kv. lines, plus the backfeed on the Highlandtown line.

[19217] Q. Maybe this can help you, Mr. Davis, in order to save time. I am informed that there is a possibility, at least—we are not sure—that the figures you used are gross figures received at Safe Harbor. A. That is what they are; yes.

Q. Whereas the figures appearing in the Form 1 are the net hourly figures metered at Baltimore. Do you think that accounts for the difference? A. That probably will.

I can give you in just a minute the figures that we were using. The 157,961 is the gross [19218] backfeed received at Safe Harbor on the 220 kv. line.

Q. What is the 1,676 mwh. appearing at line 9 of Table V-B of Exhibit 421? A. That is backfeed on the Highlandtown line to Holtwood.

Q. Is it a gross metered figure or a net hourly figure, or what? And where is it measured? A. That is measured at Highlandtown.

[19220] Q. Where did you get the figure of 162,677 mwh. appearing in line 10 of Table V-B of Exhibit 421? A. That is the total delivery from Safe Harbor to Holtwood in excess of the 292,323,000 kilowatt hours representing Holtwood's entitlement from Safe Harbor.

Q. Well, "how did you compute it?" is my question. A. We computed it by deducting from the net generation at Safe Harbor the delivery to Baltimore over the 220 kv. lines, plus the delivery to the railroad for Maryland service, and then deducting from that balance the 292,323,000 of Holtwood's entitlements, leaving 162,687,000 delivered to Holtwood in excess of Holtwood's entitlement.

[19222] Q. What next did you do in order to arrive at the 162,677 mwh.? I take it you subtracted the 300,340 mwh. first, did you not? A. Well, I added that to the delivery to the railroad from Safe Harbor for Maryland service and subtracted the sum.

Q. How much was that? A. 121,628,000.

Q. 121,628,000, or 121,628 mwh., is the net delivered to the Pennsylvania Railroad at Perryville and Conowingo as part of the contractual supply of the electric companies, and by "electric companies," I mean Safe Harbor, Penn

Water, and Baltimore Company; is that correct? A. I don't know about that. This is the delivery [19223] from Safe Harbor, with a small amount added at Perryville.

[19224] THE WITNESS: I have been working all through the recess working up the figures of how I derived the 121,628 [19225] delivered to the railroad. That was the last question he asked me.

MR. MYSE: That is all right.

THE WITNESS: And that 121,628 mwh. is derived from a number of figures which are on the five sheets of special meter readings which I testified the other day were furnished by the company at our request in addition to the other data that was supplied.

TRIAL EXAMINER: May I see what you have tabulated during the recess?

THE WITNESS: Yes, sir. That is the data. That data is all furnished by special meter readings requested of the company.

TRIAL EXAMINER: What is "Cga"?

THE WITNESS: Conestoga.

TRIAL EXAMINER: Is there any objection to having the reporter copy that in the record?

MR. MYSE: No objection.

TRIAL EXAMINER: The witness may hand his tabulation to the reporter and the reporter may copy it in the record at this point.

(The tabulation is as follows:)

[19226] SUPPLY FROM SAFE HARBOR TO
 PENNSYLVANIA RAILROAD COMPANY
 FOR SERVICE IN MARYLAND

Gross 25-cycle generation at

| | |
|-------------|---------|
| Safe Harbor | 299,384 |
| Station use | 2,709 |
| | 296,675 |

| | |
|-------------------------------|---------|
| Transfer 60-cycle to 25-cycle | 109,846 |
| | 407,746 |

| | |
|--------------------------------------|---------|
| Total 25-cycle output at Safe Harbor | 407,746 |
| Back feed | 1,225 |

| | |
|---|---------|
| Net output 25-cycle from Safe Harbor | 406,521 |
| Delivery to Philadelphia Electric Co. in interchange at Perryville and Thorndale | 75,809 |

| | |
|--|---------|
| Net to Railroad Company for Pennsylvania and Maryland | 330,712 |
|--|---------|

| | |
|--|---------|
| Net output on circuits P-7 and P-8 from Conestoga | 129,774 |
|--|---------|

| | |
|--|------|
| Diversion at Safe Harbor to Railroad | 6254 |
| Diversion at Fishing Creek to Railroad | 9003 |

15,257

| | |
|--|---------|
| Balance delivered to Railroad for Maryland | 114,517 |
|--|---------|

| | |
|--------------------------------------|-------|
| Net through "BB Meter" at Perryville | 4,264 |
|--------------------------------------|-------|

118,781

| | |
|----------------------|-------|
| Peak Transfer energy | 2,847 |
|----------------------|-------|

118,781

| | |
|---|---------|
| Total from Safe Harbor to Railroad in Maryland | 121,628 |
|---|---------|

[19227] By Mr. Myse:

Q. Now, Mr. Davis, didn't you have to make a somewhat similar calculation to arrive at the figure of 121,628 mwh., which you say is the delivery to Baltimore for the railroad in Maryland, and appears on your work sheet?

A. That is the way I arrived at the 121,628.

[19231] Q. Now, I don't think you have completed your statement as to how you derived the figure of 162,677 mwh. We got as far as the figure 121,628 mwh. that we have been referring to.

Does the work sheet entitled "Backfeed and Diverted Energy Supplied by Baltimore for Firm and Interchange Sales in Pennsylvania" show the derivation of that figure?

A. Of the 162,000 figure?

Q. Yes. A. That is correct. I first deducted the sum of the delivery over the 220 kv. lines to Baltimore of 300,340 mwh.

Q. Well, I think it will save time, Mr. Davis, if we mark for identification, if we may, Mr. Examiner, the work sheet I have just referred to, as Exhibit 432.

[19232] MR. MYSE: Mr. Examiner, I am informed that the Commission Staff has a negative of Exhibit 432 for Identification, and if we can have the Examiner's permission we should like to use that negative for purposes of making the required additional copies.

MR. HALL: We will be glad to furnish it, Mr. Examiner.

TRIAL EXAMINER: Yes.

The document handed the reporter may be marked Exhibit 432 for Identification.

(The document referred to was marked Exhibit 432 for Identification.)

[19233] Q. Mr. Davis, if you will put down on a piece of paper for me the net generation at Holtwood which appears on schedule 575 of the Form 1 report for 1946 filed by Penn Water in an amount of 758,801,000 kwh and add to it a number of figures, the first one of which is the amount shown by Penn Water in Schedule 551 entitled, "Purchased Power," appearing at page 552 of the Form 1 report as the kilowatt hours received from Safe Harbor Water Power Corporation in the amount of 583,171,000—am I right so far? A. That is the figure reported on page 523.

MR. HALL: For my own information, Mr. Myse, the first figure of 758,801,000, is that net generation of Holtwood for 1946?

MR. MYSE: That is correct, is it not, Mr. Davis?

THE WITNESS: Yes.

MR. HALL: Holtwood hydro or Holtwood steam?

THE WITNESS: Both.

By MR. MYSE:

Q. And, also add to it the amount of backfeed purchased from Baltimore during the year 1946 as shown on schedule 552 of the Form 1 report filed by Penn Water, page 524, in the amount of 159,482,000 kwh. Am I right so far? A. 159,482,000?

[19234] Q. Yes, am I right so far? A. That is right.

Q. And also add to it the amount of other interchange purchases also appearing on the same schedule 552 shown in column K of that schedule which amounts add up, I believe, to 12,760,000 kwh for the year 1946; is that right?

TRIAL EXAMINER: Read that, will you, please?

(Question read.)

TRIAL EXAMINER: That is the amount you get by adding together the three figures you have given plus this interchange energy figure, or is the interchange energy figure that 12 million?

MR. MYSE: No, sir. It is the amount we get as the annual interchange purchases from other customers other than Consolidated by adding four figures as they appear in schedule 552, is not that right?

THE WITNESS: That is right.

By MR. MYSE:

Q. Is my addition correct? A. 12,760,000?

Q. That is right. Now, if you add ~~these~~ four figures, that is the net generation and the amounts shown in Penn Water's report as received from Safe Harbor, and the Baltimore backfeed and the other interchange purchases, you arrive at a figure of 1,514,214,000 kwh, is not that right? A. That is the arithmetic of it.

[19235] Q. And if you deduct the losses reported by Penn Water in its Form 1 report for 1946 in schedule 575 in the amount of 64,763,000 kwh, you will arrive at a balance of 1,449,478,000 kwh, is that right?

TRIAL EXAMINER: Your decimal is off, is it not? It is not a billion, is it?

MR. MYSE: Yes, I am saying subtract 64 million odd from 1,514,000,000—

THE WITNESS: 1,449,000,000.

* * *

[19236] Q. From which, if you subtract the 64,763,000 loss as shown by Penn Water, you arrive at a figure of 1,449,478,000 kwh for the year 1946, right? A. You arrive at 1,449,478,000.

Q. Kwh? A. Yes, sir.

Q. Now, if you will subtract from that figure of 1,449,478,000 kwh the firm load requirements of Pennsylvania as found by you in Table V-B of Exhibit 421, line 13, column 6 in the amount of 746,286,000 kwh, you will get a balance of 703,192,000 kwh. Is not that correct? A. That is right.

Q. Now, if you deduct from the 703,192,000 kwh we have just referred to, the amount of interchange sales shown on schedule 575 of the Form 1 report filed by Penn Water in the year 1946 in the amount of 204,424,000 kwh you will arrive at a figure of 498,768,000 kwh; is that right?

A. That is right.

Q. Now, the 1,514,214,000 kwh which we arrived at by adding the first four figures represents, does it not, the total energy actually received by Holtwood from all sources in the year 1946, is not that right, as shown by the Penn Water Form 1 report? A. Those are the figures taken out of the Penn Water [19237] Form 1 report.

Q. Now, Mr. Davis, will you answer my question. My question is simply this: Is my statement correct? A. I do not know whether it is or not.

Q. You are unable to tell me whether it is correct, is that right? A. Yes.

[19244] Q. Now, if you will refer to your Table V-B, Exhibit 421, column 6, line 13, you show a figure of 746,286 mwh which is equivalent to 746,286,000 kwh as the firm load requirements in Pennsylvania. Now, my question is, that amount includes not only the firm supply to the three Pennsylvania customers that you show on Table V-A of your exhibit, but also an amount of energy supplied to the Pennsylvania Railroad; is that not correct? A. Right.

Q. Now, what is the figure for the firm energy requirements of the three Pennsylvania customers alone?

[19245] A. That is 538,000,000 if I recall.

Q. Is that shown in Form 1? A. 532,804,000.

Q. And that is shown in Form 1, Schedule 530, page 513, is it not? A. Yes, sir.

Q. Now, how much does that leave, if you will do the arithmetic for me, as the amount which you show in the figure in column 6, line 13 of Table V-B of Exhibit 422, as furnished to the railroad in 1946? A. 213,482,000.

Q. Now, is it your testimony that that 213,482,000 was furnished to the railroad in Pennsylvania during the year 1946? A. Yes, sir.

Q. Where did you get the figure of 213,482,000 kwh? A. That is the balance of the output at Safe Harbor that we worked out a short time ago after deducting the 121 million that goes through to the Railroad Service in Maryland.

[19247] Q. Now, at line 14, column 6 of your Table V-B, Exhibit 421, you show an amount of 191,664,000 which you label as the total net interchange sales in Pennsylvania? A. That is correct.

Q. Now, those are net interchange sales and not gross sales? A. That is true.

Q. The actual gross sales in Pennsylvania of interchange energy are an amount derived by adding back 12,760,000 kwh, is not that right? A. That is right, and you get 204,424,000 kwh.

Q. Now, actually a large proportion of those interchange sales are made by the use of energy generated at Safe Harbor, right? A. That is probably true.

Q. Mr. Davis, if you will now refer to column 10, line 14 of your exhibit, you there show a figure of 65,863,000 kwh as the amount of net interchange sales in Pennsylvania which [19248] you show as coming from what you call Baltimore supply; is not that right? A. Baltimore supply to Holtwood, that is right.

Q. Now, under the method you have pursued in arriving at that figure of 65,863,000 kwh, about half of that amount roughly comes from what you call diversion from Baltimore's two-thirds of Safe Harbor, is not that right? A. It may be, I do not see just how you figured that.

Q. Well, now, the 322,314,000 kwh appearing in column 4, line 11 of Table V-B was derived by adding the figures appearing in lines 8, 9, and 10, right? A. Yes, sir.

Q. And roughly half of that 322,314,000 kwh is what you call diversion from Baltimore's two-thirds of Safe Harbor, is that right? A. That is right.

[19249] Q. Well, if instead of adding the three figures in lines 8, 9 and 10 to the total of 322,314,000 you had transferred them over into column 4 and applied a percentage to the figure of 162,677,000 kwh which you call diversion from Baltimore's two-thirds of Safe Harbor, you would have roughly 17 per cent, would you not? A. Yes, sir.

Q. And if you followed out your calculations in exactly the same way with the difference of not adding the three figures appearing in lines 8, 9 and 10, you would find that you would have roughly 17 per cent of the total net interchange sales in Pennsylvania coming from the diversion from Baltimore's two-thirds of Safe Harbor generation, is not that right? A. That is right.

[19250] Q. And that would be roughly half of the figure of 65,863,000 kwh appearing in column 10, line 14 of Table V-B of Exhibit 421, is not that right? A. Yes, sir.

MR. HALL: Mr. Davis, are your last answers predicated upon the assumptions that Mr. Myse has made?

THE WITNESS: Yes.

[19253] Q. The next question, then, is: How did you derive the figure of 213,482,000 kwh as referred to by you on page 19245? We are unable to check it. A. In the table on page 19226 of the transcript, line 11, I have a figure of 330,712,000 kwh., which is the balance of the 25-cycle output from Conestoga after deducting interchange to Philadelphia Electric Company. That should be changed in the transcript.

Q. That is line 9. The word "Pennsylvania" should be changed to Philadelphia; is that it? A. That is right. Philadelphia Electric Company at Perryville and Thorn-

dale. That balance is available for the Railroad Company, both in Maryland and in Pennsylvania.

Then the amount of 121,628,000, which is the balance of energy delivered down the P-7 and P-8 circuits to the railroad, for service in Maryland, deducted from the 330,712,000 kwh., gives 209,084,000 kwh., which is increased by 4,398,000 to make the 213,482,000 kwh.

Q. Where did the 4,398,000 kwh. come from? A. That is the peak transfer energy which is deducted from the interchange sales to Philadelphia Electric Company and added to the railroad bill.

Q. But you show, in line 19, page 19226, which reads "Peak Transmission energy", which I understand should be [19254] "Peak Transfer Energy," as 2,847,000 kwh. A. Yes. I gave you that erroneously. That is a discrepancy that I could not account for in getting the Railroad Company bill as reported by the Holtwood Company. That figure of 2,847,000 kwh. is an adjustment figure that I cannot account for.

Q. Well, do I understand, then, that the figure of 2,847,000 kwh. appearing at line 19 of page 19226 of the transcript is not peak transfer energy? A. That is not peak transfer energy that I know of. It may be. It is a discrepancy between the result of applying the method used by the company in computing the railroad bill which differs by that amount from the bill as reported in the company's reports, and I don't know whether it is peak transfer energy or what.

Q. Well, I'm lost, Mr. Davis. I understood you to say yesterday that the calculation shown by page 19226 of the transcript was the kind of calculation used by you in determining the amount of 121,628,000 kwh. appearing at line 20 of that page. Was I right in that? A. Surely.

Q. Well, now, do I understand, then, that you arrived at that figure by adding some arbitrary amount to 118,781,000 to make it come out with some figure you say the company reported? [19255] A. That is right.

[19263] Q. Will you refer again, Mr. Davis to your Table V-B of Exhibit 421? [19264] A. Yes, sir.

Q. Am I correct in understanding that table to mean, referring more particularly to Column 11, that the figure of 502,485,000 kwh, shown in line 15 of that column is the total amount of energy which you regard as sold to the Baltimore Company? A. From Holtwood's resources; that is right.

Q. When you say from Holtwood's resources, you are using the term "resources" as you defined it yesterday; that is correct? A. That is correct.

Q. And that figure is made up of a delivery to Baltimore Company at Highlandtown shown in line 6 of an amount of 376,684,000 kwh—is that right? A. That is right.

Q. —and, in part, of a delivery—or shall I say a net delivery—of interchange energy, to the Pennsylvania customers, of an amount of 125,801,000 kwh. Now, which is it: net or gross? A. It is net delivery. It is the proportion of the total net of 191,664,000 kwh shown in Column 6.

Q. Now, as I understand your Exhibit 421, the summation of those two figures of 502,485,000 kwh, you regarded, by the method that you pursued on Table VI, as sold to Baltimore Company at 1.3 mills; is that right? [19265] A. I believe that is right, yes.

Q. And that shows in Footnote No. 3 to Column 4 of Table VI; is that right? A. That is right.

Q. And the cost of 1.3 mills that you show there is derived on line 27 of Table V; is that right? A. That is right.

Q. As I also understand your exhibit, the amounts shown in Column 12 of Table V-B, in two places, or specifically the amount of 256,451,000 kwh, is that portion of the firm load requirements of the Pennsylvania customers which you regarded as having been furnished from either Baltimore back feed or diversion from Baltimore's

two-thirds of Safe Harbor generation? A. Yes, that is right. That is what that figure represents.

Q. That means, does it not, that approximately half of the amount of 256,451,000 kwh was regarded by you as a firm power supply in Pennsylvania, coming from diversion from Baltimore's two-thirds of Safe Harbor output; is that right? A. That would be what would show if you prorated it separately on the items of backfeed and diversion.

Q. Yes.

TRIAL EXAMINER: What do you mean by that?

[19266] THE WITNESS: I have taken back feed and diversion of 322,314,000 kwh and developed the percent of the total supply at Holtwood at 34 percent, and the firm, the balance of it, as 65 percent. The 256,451,000 kwh is then prorated from that total. Mr. Myse says then that if I had prorated it separately from the back feed and from the diversion, each of which is approximately half of this 322 million, I would have gotten half of this 256,451,000 kwh as derived from diversion at Safe Harbor from Baltimore's two-thirds share.

TRIAL EXAMINER: I see.

By MR. MYSE:

Q. In your Table VI, Mr. Davis, of Exhibit 421, you have, in effect, have you not, credited Baltimore Company with that amount of 256,451,000 kwh at a rate of 4.7 mills; is that right? A. That is correct.

Q. So that means, does it not, you regard that amount of energy at that rate as having been bought from Baltimore Company? A. In allocating the costs I have regarded that amount as having been supplied by Baltimore Company to Holtwood, for which there are no costs in the figures that I have allocated—that is taken from Holtwood's reported costs. These costs, then, of this energy at 4.7 mills [19267] have been added to the costs

reported by Holtwood, and prorated over the energy supplied to the Pennsylvania customers.

Q. Is that 4.7 mills, in your view, supposed to represent the cost to Baltimore? A. Baltimore's average production cost.

Q. Well, actually, half of that 256,451,000 kwh, which you regarded as supplied from the diversion from Baltimore's two-thirds of Safe Harbor's output, does not cost anywhere near 4.7 mills at Safe Harbor, does it, in your view? A. At Safe Harbor, no. I don't consider that cost at Safe Harbor.

Q. Do you know what the cost of that energy was, which you regarded as having been diverted from Baltimore's two-thirds of Safe Harbor output? And when I refer to cost, I mean cost to Safe Harbor. A. No, I wasn't interested in that figure.

Q. You just don't have any idea at all of what the cost would be in terms of kwh? A. I didn't try to find out, no.

Q. Do you know whether it would be less or more than 4.7 mills? A. Oh, certainly, it would be less.

Q. Much less?

MR. GOLDBERG: For my own edification, are you referring [19268] to the assumption of what the energy would cost at Safe Harbor if generated by Safe Harbor; is that it?

MR. MYSE: Yes.

A. I don't know how much less, but I imagine it wouldn't have been so very far away from the average cost of 502 million kwh, although I don't know exactly what it would have been.

MR. MYSE: In other words, you think it would be somewhere near the 1.3 mills you found on Table V; is that right?

THE WITNESS: It would be nearer than than 4.7.

By MR. MYSE:

Q. You can figure it very easily from Table V, can you not? Will you turn to Table V? A. I have it.

[19269] Q. Let's look at Table V, line 20. You there show what you assume as the cost of power to Holtwood from Safe Harbor, do you not, in Column 1? A. That is right.

Q. In an amount of \$1,007,185; isn't that right? A. That is right.

Q. Now, if you followed the same procedure that you followed on Table V, you would allocate 74.85 per cent of that amount to capacity, and the balance to energy, would you not? A. Yes.

Q. How much would those two capacities and energy components of cost be, if you did that? A. It would be somewhere around—

Q. Will you figure it on the slide rule, please? A. Somewhere around \$750,000.

Q. I get \$754,000. Does that check with you as a capacity cost? A. That is about right, yes.

Q. Is that right? A. That is right.

Q. That means that the energy costs allocated as you have allocated them on Table V for Safe Harbor alone would be approximately \$253,000; isn't that right? A. That would be the balance of the total; that is [19270] right.

Q. Now, if you divide that amount of \$253,000 by the amount which you show as Holtwood receipts from Safe Harbor in line 2, Column 3 of Table V-B of your Exhibit 421, in the amount of 292,323,000 kwh, what rate do you get? And I get a rate of .865 mills. Will you check that for me, please? A. That is probably about right.

Q. That means that the cost of Safe Harbor energy on that basis is approximately .865 mills per kwh; isn't that right? A. That is 25 percent of the cost.

Q. Well, so far as energy cost is concerned, that is the energy cost of Safe Harbor energy; isn't that right? A.

That is the component that I have allocated on an energy basis.

Q. And that is the comparable figure to the 1.3 mills you show in Table V-A, is it not? A. That is right.

* * *

[19276] TRIAL EXAMINER: Well, I want to know what it is.

THE WITNESS: The costs of that energy at Safe Harbor have nothing to do with the way I have allocated those costs, and the way I have credited the cost of that energy to Baltimore at Baltimore's average steam production cost.

TRIAL EXAMINER: Why did you credit it to Baltimore at its average steam production cost?

THE WITNESS: Because that energy at Safe Harbor is paid for in full by Baltimore Company, and, according to contract, Baltimore is entitled to have it delivered to Baltimore at whatever the cost is and whenever it allows it to be diverted for any other purpose it has to generate steam energy in Baltimore to replace it.

By MR. MYSE:

Q. Does it always have to generate steam energy in Baltimore at times that the energy from Safe Harbor is diverted, as you say? A. Any energy that it might receive from Safe Harbor and does not receive has to be replaced in Baltimore by steam generated energy.

Q. Are there any times when Baltimore diversion is transmitted to Pennsylvania customers as you view it, when Baltimore Company cannot use that same amount of that diversion during the same hour?

* * *

[19277] A. I think there are some times during good water periods and low load periods when Baltimore feels that it cannot reduce its steam generation to the point of taking all of that.

By MR. MYSE:

Q. So that means, does it not, that the amount which is diverted during those times does not cause Baltimore to generate any additional energy; is that right? A. That is true, to that extent.

Q. Did you make any investigation to determine the number of hours during 1946 when that does happen? A. Well, the amount of energy is reported in several of these exhibits. I didn't look to see in how many hours it happened.

Q. Where did you get the rate of 4.7 mills which you used in Table VI? A. That is from the reported costs of production of Baltimore Company.

TRIAL EXAMINER: Is that from the Form 1 report?

THE WITNESS: That comes from the Form 1 report, yes.

TRIAL EXAMINER: That wouldn't be the pool report, would it?

THE WITNESS: No, Baltimore Company's Form 1 report.

[19278] By MR. MYSE:

Q. Do you have Baltimore Company's Form 1 report before you, so you can show me just exactly where that figure came from? A. It is the average of three stations in Baltimore. I thought I had the figures added up so I could give it to you immediately, but it is the average cost reported from the Westport, Gould Street, and Riverside plants, divided by the net generation as reported—the 4.7 mills can be derived by adding the figures from those three plants and—

Q. Well, have you any calculation showing how you derived the figure of 4.7 mills? A. I thought I had those figures added up here.

Do you still want me to figure it?

Q. I would like to know where the figure came from, and if you have any calculations, I would like to see them.

A. The figure came from the Consolidated's Form 1 report for 1946, Schedule 579, Consolidated Gas Electric Light and Power Company's report for 1946, line 34, shows total production expenses for four plants. Three of them are the main generating stations. The other one is used more for steam heating than for generation, and it was omitted. The sum of the operating expenses reported on line 34 is \$9,202,392.

[19279] On line 12 is shown the net generation, the sum of which for the three plants is 1,950,252,000 kwh. Dividing the dollars by the kilowatt hours results in approximately 4.7 mills per kilowatt hour.

Q. Do I understand, then, that you took the figures from this Consolidated Gas and Electric Company Form 1 report for 1946, and you didn't make any calculation similar to the one you made now, or you did? A. Yes, this calculation was made.

Q. Well, did you have it in the form of a working sheet at all? A. No. I didn't save anything like that. I had a statement that it was 4.7 mills.

Q. Did you make any investigation of the figures appearing in lines 22 to 33, inclusive, of Schedule 579 to determine whether or not any of them were proper expenses applicable to the steam plants of Consolidated Gas Electric Light and Power Company? A. I observed what those items were, and figured the average production cost on the basis of the totals.

Q. Well, answer my question, will you, please? A. Yes, I did.

Q. You did make an investigation of each and every item of costs shown in those lines that I have referred to to determine whether or not they were proper; is that [19280] your testimony? A. You mean to go back of this report and find the components of them?

Q. To determine whether each and every figure appearing in the report was a proper figure or not. Did you do that?

MR. GOLDBERG: Each and every figure appearing in the report involved in the matter you are referring to?

MR. MYSE: In the lines I have referred to, yes.

A. That is the total of all of the items of production expense? You mean did I go back in to the Company's books and see what items were charged into those various amounts?

By MR. MYSE:

Q. That is right. A. I did not.

Q. Did anyone under your direction do that? A. I didn't ask anybody to.

Q. So far as you know, you just took the figures from the report; is that right? A. That is right.

Q. You do know that Consolidated Gas Electric Light and Power Company has other business other than its electric business, do you not?

[19281] MR. GOLDBERG: I object to that as entirely immaterial and irrelevant, unless counsel can show what he is attempting to prove here through suggestion, which is not a proper way.

MR. MYSE: I am cross-examining on the figure of 4.7 mills.

MR. GOLDBERG: He has answered he didn't go behind those figures. He accepted them. They are furnished under oath.

TRIAL EXAMINER: If counsel knows what that business is he should put it in the form of a question. This is taking too much time.

MR. MYSE: Do I understand the objection is sustained?

TRIAL EXAMINER: It is in part. I am making a suggestion whereby you can put a proper question—which

the Examiner would deem a proper question—to the witness.

MR. MYSE: I would like to know, Mr. Examiner, what the ruling is.

TRIAL EXAMINER: You are not going to pin the Examiner down like you are doing the witness.

MR. MYSE: In order that it may be clear—this is very important to our case—I would like to repeat the question, Mr. Davis. Do you know whether or not Consolidated Gas Electric Light and Power Company of Baltimore does in fact conduct other business other than its electric business?

[19282] MR. GOLDBERG: I object, unless counsel specifies what other business.

TRIAL EXAMINER: Objection sustained.

By MR. MYSE:

Q. Do you know whether or not Consolidated Gas Electric Light and Power Company of Baltimore conducts a gas distribution business?

MR. GOLDBERG: I object, Mr. Examiner, unless a foundation is shown that such business would be reported in FPC Form 1, in connection with electric operating expenses and revenues.

TRIAL EXAMINER: Objection sustained.

By MR. MYSE:

Q. Do you know how the electric operating expenses shown in Schedule 579 of the Consolidated Gas Electric Light and Power Company Form 1 report for 1946 were derived?

MR. GOLDBERG: I object to that. The witness has testified that he accepted the figures and did not go behind them.

THE WITNESS: Did you say "revenues"?

MR. MYSE: No. Expenses. If I said revenues it should be corrected.

MR. GOLDBERG: I object to the question anyway.

TRIAL EXAMINER: This is the point I have in mind. I have [19283] observed, in the cross-examination of this witness, as I have in the cross-examination of other witnesses by other counsel, that too often there is a tendency to subject the witness to a type of questioning which, to use a military expression, resembles a creeping barrage or a box barrage. And I am opposed to it because of the time that has been consumed by that kind of thing in this hearing. I think that partly explains why this hearing has gone on and on through cross-examination for day after day.

Now, if counsel knows of anything that exists that invalidates the use of this Schedule 579, as he knows the witness has used it, let him put a direct question to the witness.

MR. MYSE: Do I understand, Mr. Examiner, that the objection to my last question is sustained?

TRIAL EXAMINER: Yes.

MR. MYSE: In reply to the Examiner's statement I would like to say this: That of the total number of days of cross-examination, approximately some one hundred days were consumed by cross-examination by Staff counsel.

By MR. MYSE:

Q. Now, Mr. Davis, do you know whether or not any of the expenses shown in lines 22 to 33, inclusive, of Schedule 579 of the Form 1 report to the Federal Power Commission for the year 1946 by Consolidated Gas Electric Light and Power [19284] Company of Baltimore were derived by allocation of joint expenses between the gas business of

that Company and its electric business? A. That does frequently happen in accounting for two classes of business. I accepted the figures here, which are reported as electric costs, as such, and, if any allocations were made, I have assumed that the proper proportion was allocated to electric costs.

Q. You did not determine whether or not the allocation was correct, did you?

MR. GOLDBERG: I object. The witness has testified to what he has done.

TRIAL EXAMINER: Objection sustained.

MR. MYSE: Mr. Examiner, I would like to point out that we are now being deprived of a very, very essential portion of our right of cross-examination upon the specific figure of 4.7 mills per kwh. used by this witness in arriving at the results in Exhibit 421, and, as shown by the testimony at this point, derived from a report by Consolidated Gas Electric Light and Power Company of Baltimore without further examination on his part. And we therefore make the point that we are being deprived of that right in violation of our rights under the Constitution of the United States.

MR. GOLDBERG: May I be heard, momentarily, Mr. Examiner?

TRIAL EXAMINER: Just a minute. I wish to point out [19285] this: You have three answers from this witness which are completely negative, as the Examiner sees it, in so far as any assignment of error as you have just made is concerned.

First, the witness testified that he took the table as he found it; second, that he made no investigation as to the computation of the data as it appears in the table, and, third, that there might be assignment of expenses as between different types of business.

And I have ruled the questions out on the grounds that the matter has been covered.

MR. GOLDBERG: Mr. Examiner, in connection with counsel's statement of deprivation of due process, I have been sitting here all morning wondering why all this cross-examination about the 4.7 mills when in Exhibit 369 Mr. Spaulding himself shows, for 1946, under the heading "Baltimore Company Average Monthly Production Cost Plus 10%," 5.10 mills per kWh.

Now, if you deduct the 10% from that there is no substantial difference between the 4.7 and the figure we would get after deducting 10% from 5.10. I just haven't been able to understand it.

MR. MYSE: All I can say to that is that there is no substantial similarity between the figures to which the mill rates were applied either between the two exhibits.

MR. GOLDBERG: Look at the description by Mr. Spaulding.

[19286] TRIAL EXAMINER: All right; proceed.

That mill rate in Exhibit 369 works out to 4.63, does it not?

MR. GOLDBERG: Something like that.

[19294] Q. Well, is it your testimony that that supply of interchange energy to the Pennsylvania customers benefits Baltimore? A. That, in effect, is Baltimore selling energy in Pennsylvania. It pays all the costs of it, it gets all the revenue from it.

Q. And that is in conformity with the testimony you gave once before on cross examination in connection with Exhibit 64; is that right? A. I think I said that same thing, yes.

Q. That means, does it not, that the greater the amount of interchange energy supplied to the Pennsylvania customers, the greater will be the back feed and diversion of Baltimore's two-thirds from Safe Harbor, as shown in line-

11, column 4 of your Table V-B, Exhibit 421; isn't that correct? A. If all other conditions remain the same and the interchange is increased, that would require more back feed or diversion.

Q. And that would increase the percentage figure shown [19295] in your column 5, line 12, as 34.4 per cent, under those conditions; isn't that correct? A. With all other conditions remaining the same, and an increase in back feed and diversion, that percentage would increase.

[19296] Q. Well, to put it another way, the greater the amount of interchange supplied to the Pennsylvania customers, with the firm loads of those Pennsylvania customers remaining the same, the greater the percentage of available supply for firm and interchange sales in Pennsylvania, as shown in your columns 4 and 5, line 12, Table V-B of Exhibit 421. Isn't that correct? A. That would be correct if the generation at Holtwood and Safe Harbor remained the same and the load remained the same.

Q. Assuming all other conditions the same but interchange supply to Pennsylvania customers increased, it would have that effect, would it not? A. That is correct.

Q. And, as a result of that, if you therefore increased the amount of interchange supplied to the Pennsylvania customers, and all other conditions, as you show them on your Table V-B of Exhibit 421, remained the same, you would come out with, if you pursue your method of cost allocation as shown on Table VI, a higher weighted average cost of firm energy to Holtwood, as shown in your footnote 1 of Table VI. Is that correct? A. The amount of energy supplied from Baltimore would be increased and the additional charge at steam production cost would be increased, and the weighted average would [19297] therefore increase, that is correct.

Q. By a mere change or increase in the amount of interchange energy sold to the Pennsylvania customers; isn't that right?

MR. GOLDBERG: All other things remaining equal.

MR. MYSE: Yes.

THE WITNESS: That is correct.

[19301] Q. Well, then, you are testifying that that rate of 4.7 mills represents, to you, the average cost of backfeed? Is that your testimony? A. I have so used it.

Q. Well, do you know whether it is the average cost of [19302] backfeed? A. Now you are asking me again if I have analyzed Baltimore's books to find out all the items in there.

Q. No, sir. A. I have not.

Q. Well, did you analyze any of the costs of Baltimore Company to determine whether or not the costs of just the backfeed energy supplied by Baltimore to Holtwood were any different from the average costs of production of energy?

[19303] A. I have made no distinction. I applied the average cost to both back feed and diversion.

By MR. MYSE:

Q. All right. Now, the average cost of production of energy at the three plants which you referred to from the Consolidated Form 1 report does vary widely, doesn't it?

[19304] THE WITNESS: There is some variation in the average cost of one plant and another.

By MR. MYSE:

Q. And, as a matter of fact, the average production cost for the year 1946 for the Riverside plant was only 3.57 mills; isn't that correct? A. I don't have that in mind at the moment.

Q. Well, you can check it very quickly, can't you, from the same Consolidated Form 1 report? A. 3.57 mills.

Q. And, as a matter of fact, the average cost of energy

which Consolidated Gas Electric Light and Power Company received from Pepco in the year 1946 is only 3.68 mills; isn't that right? A. I don't know.

[19305] Q. Mr. Davis, don't you know, as a matter of fact, that a large proportion of the back feed energy furnished by Baltimore to Holtwood is generated and comes from the Riverside plant?

MR. GOLDBERG: I object to that, Mr. Examiner, as vague and indefinite. "Large proportion" is a relative term and there is no foundation laid as to what he means.

TRIAL EXAMINER: Objection overruled.

A. I don't know what proportion comes from the Riverside plant.

By MR. MYSE:

[19306] Q. I take it you made no study, then; is that right?
A. That is right.

Q. You know that some comes from the Riverside plant? A. I assume that some comes from each of the plants.

Q. Do you know that a substantial proportion of the back feed energy furnished by Baltimore Company to Holtwood originates on the system of Pepco, and is purchased originally by Baltimore Company from Pepco at some mill rate which we will furnish later in the record? A. I knew that some back feed came from Washington. I didn't know how much.

Q. Mr. Davis, Table VI, Exhibit 421, Footnote (2). You show there a rate of \$12 per kw, which you applied to the negative capacity supplied from Holtwood to Baltimore Company in arriving at a figure of \$38,400, which you used in Column 6, Line 5, of your Table VI. My question is: where did you get the rate of \$12? [19307] A. I used \$12 as a conservative amount that would be considered reason-

able as a cost to the Pennsylvania customers, believing that it was not the full capacity cost.

Q. You say cost to the Pennsylvania customers? A. As an amount to be included in the cost of serving the Pennsylvania customers.

Q. Well, is that \$12 per kw related in any way to costs of Baltimore Company? A. It is not definitely related—that is, mathematically—but, as I said, not attempting to charge what would be full capacity costs from Baltimore supply, but a reasonable addition to the cost of serving the Pennsylvania customers.

Q. Well, what factors did you consider in coming to the conclusion that \$12 was that reasonable cost? A. I didn't consider any mathematical quantities.

Q. I am not asking you that. I haven't confined my question to mathematical quantities. I asked you generally what factors you considered. A. Just a general judgment of reasonableness, as a cost to be included in that of serving the Pennsylvania [19308] customers.

Q. Well, didn't you have anything in mind as a criterion of what is the measure of reasonableness? A. Knowing that steam generating costs are usually more than that, and knowing that the capacity or demand charges in contracts for sale of that power are considerably above that figure, I just put that in as a judgment figure to be very conservative and reasonable in adding to the Pennsylvania service cost.

Q. What studies of capacity charges and steam capacity cost did you make in order to arrive at that judgment figure? A. I just had in mind the demand charges that are made in contracts in this area.

Q. What contracts? A. Oh, a number of them.

Q. Well, can't you be specific? A. Well, you can take Holtwood's contracts with the Pennsylvania customers.

Q. What is the demand charge made by Baltimore to Pepco? A. I don't know.

Q. Didn't you consider that at all in arriving at your reasonable figure of \$12? A. No, I didn't consider any definite quantities.

[19309] Q. Nothing definite at all? A. Just being sure that I got below actual cost.

[19312] Q. Where does the figure of \$141,777 come from which you show as an adjustment of revenue received for special facilities from the Penn Railroad in accordance with the allocation of costs of special facilities? A. That is the amount of special facility cost collected by Holtwood on the energy ratio, which is in excess of the special facility costs that I have allocated to the railroad in Pennsylvania.

Q. How much special facility cost have you allocated? Is that shown on Table VI of Exhibit 421, line 4, column 5, as \$94,038; is that what you mean by the special facility costs allocated to the railroad?

TRIAL EXAMINER: What table is this?

MR. MYSE: Table VI.

By MR. MYSE:

Q. Mr. Davis, I haven't asked you what you did. My question is: is the \$94,038 the special facility cost you have just referred to in the testimony? A. That is the amount allocated to the railroad in Pennsylvania.

Q. Well, I show you a work sheet which is headed "Holtwood Cost and Revenue Collected for Special Railroad [19313] Facilities." Is that the work sheet that you furnished Respondents showing the derivation of the figure of \$141,777 appearing on Table VI-A of Exhibit 421? A. That is right.

MR. MYSE: May we have the work sheet just described marked for identification as Exhibit No. 433 for identification?

TRIAL EXAMINER: The document handed the reporter will be marked as requested.

(~~Document marked Exhibit 433 for Identification.~~)

By MR. MYSE:

Q. Is it correct to say, Mr. Davis, that the first column of Exhibit 433 for identification shows the special facility charges to the railroad? A. That is as I understand it.

Q. Well, are those the charges that are provided for in the contract known as Exhibit 10 in this record? A. I believe so.

Q. Can't you be a little more positive? A. I think they are.

Q. And that is where you obtained the figures; isn't that right? A. Yes.

Q. The next column is headed "Collected by Holtwood." How did you arrive at those figures? [19314] A. Holtwood collects that portion of those costs represented by the proportion of the energy delivered to the railroad in Pennsylvania.

Q. How did you arrive at that ratio? A. The ratio of the total energy furnished to the railroad to the portion furnished in Pennsylvania.

Q. Do I understand you to mean that it is the ratio of energy furnished to the railroad in Pennsylvania to the total energy furnished to the Railroad? A. Well, yes, that is putting it properly.

Q. That would be the ratio of the figure—what figures did you use, can you tell me that? A. It is approximately 48 per cent, 47 and a fraction per cent, I believe. I used the figures that are shown in—I have forgotten the name of the exhibit. The tabulation of the Railroad Company's billing.

MR. GOLDBERG: Exhibit 423: is that the one you are referring to?

THE WITNESS: Yes.

By Mr. MYSE:

Q. Let's be more specific as to which figures you used.

A. The ratio of 451,843,000 kwh to 213,482,000 kwh.

Q. You mean just the reverse, do you not, the ratio of 213,000,000-some odd kwh to the figure of 451 some odd [19315] million kwh? A. Yes; that would be roughly 48 per cent, if I recall rightly.

Q. And those figures appear on one of the sheets in Exhibit 423, which is headed "Monthly charges to Pennsylvania Railroad Company;" isn't that correct? A. That is correct.

Q. In the third column of Exhibit 433 you show that none of the cost of the Benning frequency changer and the 110 kv line credit is allocated to the Pennsylvania Railroad in Pennsylvania; is that right? A. Yes.

Q. On the next line, as I understand your Exhibit 433, you allocate \$36,973 to the railroad in Pennsylvania, on account of the Safe Harbor facilities used for the railroad; is that right? A. Yes.

Q. How did you arrive at that allocation? A. That is allocated on the basis of the ratios which are developed for the Conestoga Substation, and the Safe Harbor facilities, which is in one of my working papers.

Q. Well, as I understand that, you show that you find, in one of those working papers, 53 per cent of the use of the Conestoga Substation is for use of the railroad in Pennsylvania; isn't that right? [19316] A. Yes.

Q. Did you apply that 53 per cent to the total charges of \$211,271 shown in the first column of Exhibit 433? A. Apparently not.

Q. Did you intend to? A. No, that is cost incurred by Safe Harbor, for which Holtwood paid only one-third.

Q. Well, actually the cost incurred by Safe Harbor to serve the railroad is incurred regardless of what Holtwood pays; isn't that right?

A. That is right.

By MR. MYSE:

Q. How did you arrive at the \$36,973 shown in the third column of Exhibit 433, opposite Safe Harbor facilities for the railroad? A. That is supposed to be 53 per cent of one-third of the \$211,271.

Q. Well, is it? A. It seems to be a dollar or two off.

Q. Well, assume it is what it is supposed to be: why do you take only one-third of \$211,000 and apply 53 per cent to it? A. Because that is all the cost that Holtwood incurs.

[19317] Q. You mean Holtwood only incurs one-third of \$211,271 as cost? Is that your testimony? A. That is right.

Q. Well, actually, that \$211,271 isn't a cost at all: it is just a charge specified in Exhibit 10, the contract, isn't that right? A. That is a charge to the railroad company.

Q. So it isn't a cost; it is a charge specified in the contract; isn't that right? A. That is right.

Q. Have you determined whether or not the charges in the contract are related to costs? A. They are related to costs, yes. They are a fixed percentage of investment. They are not the same costs that were included in the bill of Safe Harbor to Holtwood.

Q. Well, do you think they are reasonable costs? I will withdraw that.

Do you think the charges specified in the contract represent reasonable costs? A. Well, I had no particular reason for judging whether they were or not. I was taking them as they were reported.

Q. Then, I understand your testimony to be that you do not know whether or not the charges specified in the contract, as listed in column one of Exhibit 433, [19318] actually represent reasonable cost? A. I don't know what you mean by "reasonable". I didn't attempt to decide whether they were reasonable or not.

Q. Then, actually, your third column in Exhibit 433, which is headed "Cost Allocated to the Railroad in Penn-

sylvania," should read "The Charges Specified in the Railroad Contract Known as Exhibit 10, allocated to the railroad in Pennsylvania;" isn't that a more correct statement?

A. That would be all right, yes.

Q. And, as a result of that, your fourth column which is headed "Excess Collected over Cost Allocated to Pennsylvania," should read "Excess Collected over the Charges Specified in the Railroad Contract, Allocated to Pennsylvania"?

A. Well, I called those costs.

Q. Well, isn't my statement correct, Mr. Witness?

* * *

A. This particular item, which is different from any of the others, is a cost allocated from the charge made by Safe Harbor.

MR. MUISE: Mr. Examiner, I haven't called for that.

MR. GOLDBERG: Let the witness finish, please.

[19319] TRIAL EXAMINER: No. Just a minute. Start off answering that question as directly as you can. Then, if you have to add anything to it, you may do so. It is impossible to evaluate the witness' answer as his answer now starts off.

THE WITNESS: May I have the pending question?

TRIAL EXAMINER: Yes.

(Question read.)

MR. GOLDBERG: That has been answered directly, Mr. Examiner. He has answered directly what that means there.

TRIAL EXAMINER: He may answer.

A. The items which I have taken as charges to the railroad, which are the Benning frequency changer and the Safe Harbor facilities, which are not in Holtwood costs, could be titled as you stated. The other two items are costs of Holtwood and the title that I have here would be more correct for them.

By Mr. Myse:

Q. Are you saying that the amount of \$36,973 appearing in Column 3 is a cost of Holtwood, and is not merely an allocated portion of the charges specified in Exhibit 10, the railroad contract?

MR. GOLDBERG: Mr. Examiner, I object to that unless there is a contention being made here that charges do not represent costs.

[19320] MR. MYSE: Well, certainly there is.

MR. GOLDBERG: If anybody charges me anything and I pay for it, it is a cost, and counsel knows it.

TRIAL EXAMINER: All right. Just a minute.

MR. MYSE: I still don't think I got an answer to my question.

TRIAL EXAMINER: Just a minute. Isn't that the same question that you asked once before?

MR. MYSE: Only because, in attempting to argue with me, by his answer to the question, the witness hasn't answered the question. If the Examiner prefers I think he can have my question read back. It is a very simple question and can be answered yes or no. The question was: was my statement correct with respect to the heading in column 4.

TRIAL EXAMINER: Well, you check the transcript over the evening, because we have been over that \$36,000 item.

MR. MYSE: I take exception to that, Mr. Examiner. I think it is clear he has not answered my question.

TRIAL EXAMINER: I don't think it is clear, and if, on reviewing the transcript, it develops he hasn't answered it, then, we will consider the question further.

By Mr. Myse:

Q. Mr. Davis, is the figure of \$49,074 in column 3 of Exhibit 433, a cost to Holtwood Company? [19321] A. That

is the portion of Holtwood's cost for the Conestoga Sub-station allocated to the railroad.

Q. How did you compute it? A. The computation of the amount allocated to the railroad is based on the ratio developed in the working paper which was supplied.

Q. Is that the 53 per cent you referred to before?
A. Yes.

Q. So you applied the 53 per cent to the figure of \$93,474 in column 1, which is headed "Charges to the railroad;" isn't that right? A. That is right.

Q. So that what it is is a figure representing 53 per cent of a charge specified in Exhibit 10; isn't that right?
A. That is right.

Q. Does that represent a cost to Holtwood? A. Yes, that is a portion of Holtwood's cost.

Q. How did you get the figure of \$10,989 appearing in column 3 of Exhibit 433, opposite the designation "Perryville line"? [19322] A. That is developed in the same way, using the ratio of the Perryville line, which is—

Q. Is that the 9 per cent figure which you developed?
A. 9 per cent for service to the railroad in Pennsylvania.

Q. So you applied 9 per cent to \$122,100 appearing in column 1 of Exhibit 433? A. That is right.

Q. And that figure is also a charge specified in the contract, so that the figure of \$10,989 represents 9 per cent of the contract charge; is that right? A. That is right.

Q. And you consider that a cost to Holtwood? A. Surely, it is a part of Holtwood's costs that are charged to the railroad.

Q. How did you arrive at the figure of \$6,654 appearing in the third column of Exhibit 433, opposite the designation "Switch for railroad transformer"? A. That percentage is developed also in working papers supplied for the switching positions and switches, I believe, supplied for the railroad company transformers at Conestoga.

Q. Is it on the working paper I show you headed "Conestoga Substation" and "Safe Harbor Single Phase Equipment"? [19323] A. No, it is not on that sheet.

Q. What other working sheet is there relating to that? A. I find the work sheet in my notes here, but it hasn't been discovered in the photostatic copies as yet.

Q. Well, will you supply us with a copy of that working sheet? A. Certainly.

Q. What does the work sheet show, in the interim, as to how you arrived at the figure of \$6,654 appearing in the third column of Exhibit 433? A. It starts with the total output of Conestoga Substation of 406 million kwh, deducting first the delivery over circuits P-7 and P-8.

Q. Of how much? A. 130,862,000 and then the net to Perryville, over Circuits P-5 and P-6 of 35,060,000, leaving a balance which had to go over Circuits P-2, P-3 and P-4, and out of the amount of that balance, which is 240,599,000, 45,013,000 went to Philadelphia Electric through Thorndale, leaving a balance of 195,586,000 as the use handled by these switching facilities, or 81.3 per cent of the total energy flowing over Circuits P-2, P-3, and P-4.

Q. Then, as I understand it, you applied the figure of 81.3 per cent, which you derived in the manner you have just described, to the figure of \$8,184 appearing in column 1 [19324] of Exhibit 433, to get the \$6,654; is that right?

A. That is correct.

Q. Likewise, the figure of \$8,184 is a contract charge; isn't that correct? A. That is correct.

Q. Do you consider that a cost to Holtwood? A. Yes, that is a part of Holtwood's cost.

TRIAL EXAMINER: What was the contract charge?

MR. MYSE: \$8,184.

By **MR. MYSE:**

Q. That means, Mr. Davis, that your total of \$103,690 is what you consider as the cost to Holtwood allocated to

the railroad in Pennsylvania; is that right? A. That is the way it is allocated, yes.

TRIAL EXAMINER: What makes up the \$103,000 figure?

THE WITNESS: These four figures.

TRIAL EXAMINER: \$6,654, \$10,089, \$49,074, and \$36,963?

THE WITNESS: Yes.

[19339] Q. Referring to Table III of Exhibit 422, the fact is that the figures appearing in line 1 as hydro production costs, exclusive of purchased power, are comparable to the figures appearing in Table III of Exhibit 421, line 1, and do not include all of the hydro production costs. Isn't that right? A. That is exactly the same situation.

Q. That was that unfortunate situation. [19340]

A. Unfortunate, indeed; yes.

Q. And to that extent Table III, line one of Exhibit 422, differs in your method which you used in arriving at the figures on the comparable tables in Exhibit 64 and the worksheet to Exhibit 292 which appears as Table I of Exhibit 351; isn't that right? A. That is correct.

Q. That should be the worksheet which appears as Table III in Exhibit 351. A. Yes.

TRIAL EXAMINER: You say this figure of 224,230 in your Exhibit 422 is computed on a different basis from the 357,980?

THE WITNESS: No. It is the 357,980 minus 133,750, Conowingo backwater payment, which in both 421 and 422 is deducted from hydro costs.

TRIAL EXAMINER: All right.

The 357,980 is hydro costs?

THE WITNESS: The total hydro costs reported.

TRIAL EXAMINER: Likewise in your 421 the total hydro cost reported was 402,895; is that it?

THE WITNESS: That is correct.

[19341]. TRIAL EXAMINER: When you say "reported", that is in Form 1?

THE WITNESS: Yes, operating costs.

TRIAL EXAMINER: As I get it, then, the only difference between the latter Exhibits 421 and 422, and your Exhibit 64; is that in Exhibit 64 you did not deduct the Conowingo item.

THE WITNESS: That is right, in Exhibit 64 I did not.

TRIAL EXAMINER: All right.

By MR. MYSE:

Q. Nor in the worksheet to back up Exhibit 292. Isn't that right, Mr. Davis? A. That is right.

Q. The ratios that you show for allocating the various transmission facilities on Table III of Exhibit 422 differ from the ratios shown in the comparable table of Exhibit 64 and the worksheet supporting your Exhibit 292, which is shown as Table III of Exhibit 351, in the same manner as the ratios we referred to on Table I of Exhibit 422 insofar as such ratios on such table differ from the comparable tables in the other exhibits. A. That is true.

[19342] Q. Refer to Table IV of Exhibit 422, please, Mr. Davis.

First of all, Table IV differs from Exhibit 64 and the Table IV of Exhibit 351 which is the worksheet to your Exhibit 292 insofar as you have allocated a portion of the dollars which you label in line 2 "Bill for Safe Harbor Power." Isn't that correct? A. It differs from Exhibit 64, yes.

Q. And Table IV of Exhibit 351? A. Yes.

Q. Do I understand correctly that that allocation to Baltimore and to the Pennsylvania Railroad Company appearing at columns 4 and 5, line 2 of Table IV of Exhibit 422 was made on the comparable basis to the allocation appearing in Table IV, line 2, columns 4 and 5 of Exhibit 421?

A. That is true. All the other allocations, also.

Q. I show you a worksheet headed "Pennsylvania Railroad Service Cost Allocation, Safe Harbor Facilities" which shows figures for 1944-1945. Is that the worksheet showing the allocation of the figures on columns 4 and 5, line 2, Table IV of Exhibit 422 as well as the derivation of the amounts of the two figures together? A. That is right—only the total of the two figures.

[19369] Q. Mr. Davis, at page 19,356 you agreed to furnish one or more tabulations showing how you arrived at certain figures referred to on that page, and also a revision of a table which had been copied into the record some time before. Is that right? A. That is correct.

Q. Do you have those tabulations available this morning? A. I do.

Q. May we have copies of them? A. This is a revision of the table which was copied into the record. That is the only copy I have.

Q. This is one entitled: "1946, Energy Delivered to Railroad in Maryland and Pennsylvania from Safe Harbor." Is that right? A. That is correct.

Q. Have you used any new figures in this particular table which you have handed me other than the ones that are already in the record and which we have asked you about? A. No; those are exactly the same figures except for the slight change to show the gross and backfeed and the net delivery from Conestoga. That was a little mixed up on the [19370] other table.

Q. The other table is on page 19226; is that correct? A. That is right.

MR. MYSE: I ask the permission of the Examiner to have the calculation just handed me by the witness copied into the record as if read.

TRIAL EXAMINER: Any objection?

(No response.)

TRIAL EXAMINER: The tabulation handed the Reporter will be copied into the transcript at this point.)

(The Table referred to above is as follows:)

ENERGY DELIVERED TO RAILROAD IN MARYLAND AND PENNSYLVANIA FROM SAFE HARBOR

| | |
|--|----------------|
| Gross sendout from Conestoga | 407,746 |
| Backfeed to Conestoga | 1,225 |
| Net sendout from Conestoga | 406,521 |
| <i>Delivery to P. E. Company</i> | |
| Net north at Pv'l. | 30,796 |
| Net east at Th. | 45,013 |
| | <hr/> |
| | 75,809 |
| Balance to R.R. in Pa. and Md. | 330,712 |
| Gross Delivery on P7 and P8 | 130,862 |
| Backfeed | 1,088 |
| Net | 129,774 |
| [19371] Less diversion at S. H.. 9,003 | |
| Less diversion at Fishing Crk.. 6,254 | |
| Total | 15,257 |
| Bal. for service in Md..... | 114,517 |
| Add BB meter at Pv'l. | 4,264 |
| Total to R.R. in Md. | 118,781 |
| Adjustment to R.R. billing | 2,847 |
| | <hr/> |
| | 121,628 |
| Balance for R.R. in Pa. | 209,084 |

| | |
|---|---------|
| Total peak transfer energy which is transferred from P.E. interchange to R.R. Co. and pro-rated to Md. and Pa. | 4,398 |
| Supply to R.R. incl. peak transfer: | |
| In Md. | 121,628 |
| In Pa. | 213,482 |
| * * * | |

[19375] Q. Will you refer to Table V-B of Exhibit 422 and line 15, wherein you report a figure of 104,182,000 kwh. as additional energy delivered to Baltimore from Holtwood in an average year? Is that right? A. Additional energy available to Baltimore from Holtwood in an average year?

Q. Is it delivered or isn't it? A. It was not delivered in 1944. It is an estimated increase which would have been available in an average year.

Q. Well, in column 11 where it is located you have it under the heading "Delivery to Baltimore." Is it a delivery or isn't it? A. It is a delivery which could have been made in an average year.

Q. Are you saying, then, that 1944 was below average and [19376] you had to adjust it for that reason? A. That is correct, I took the adjustment furnished by the company.

Q. You say you got that adjustment of 104,182,000 kwh. from the company? A. That is right.

Q. Does that appear any place in Form 1? A. That is right.

Q. Where in Form 1 does it appear? A. I might have to do a slight subtraction to get that figure.

Q. I think I can arrive at it. If you look at 513-A of the Form 1 for the year 1944 filed by Penn Water and page 2 of the notes to Schedule 530— A. That is where it comes from.

Q. Did you arrive at that figure by taking the figure of 131,000,000 kwh., which is reported as the estimated net

sales by respondent to Baltimore Company, with average river flow and deducting the figure of 26,818,000 kwh., which appears immediately above it? A. That is right.

Q. Those two figures you used in arriving at the figure of 104,182,000 are both reported by the Company as net sales, are they not? A. That is right.

[19377] Q. So the figure you used in Exhibit 422 is a difference of net sales and thus must be itself a net figure. Isn't that right? A. That is right.

Q. So it is not the gross energy available to Baltimore but it is the net amount of energy available to Baltimore from Holtwood during an average year. Isn't that right? A. It is the net additional, that is right, the same thing.

Q. It is possible to increase the net deliveries to Baltimore Company by reducing the backfeed under the computation as reported in the Form 1 report in the year 1944, is it not?

MR. GOLDBERG: Talking about the same type which resulted in the 104,182,000?

MR. MYSE: That is right.

THE WITNESS: May I have the question?

(Question read.)

THE WITNESS: If all other conditions remain the same, and the backfeed from Baltimore is increased, then the net delivery to Baltimore could be decreased by that amount.

By MR. MYSE:

Q. If in fact there had been available in the year 1944 a net amount of 104,182,000 kwh. as shown by you in your Table V-B of Exhibit 422, how do you know that that amount of energy [19378] would not have been applied to wipe out the figure of 92,662,000 which is shown by you in column 1 of line 10 of the same table? A. No one can tell, of course, exactly what would have happened if the river had been up to a point of generating 104,000,000 kilo-watt-hours more than was actually produced. We can com-

pare the figures of 1944 with 1946 which was very close to an average year, and the diversion increased quite materially in 1946.

Q. Does that complete your answer? A. I was just going to say what the backfeed did but I do not see the figure right here. I believe the backfeed increased considerably in 1946 over 1944.

Q. Your Exhibit shows that it decreased in 1946 over 1944. Isn't that right, Mr. Davis? A. Yes, I see it now. It did decrease and the diversion increased.

Q. And the net interchange sales as you show them in Exhibit 421 for 1946 increased substantially over the same figures, or comparable figures, for the year 1944, did they not? A. They did.

Q. Are you testifying that if Holtwood had had available an additional 104,182,000 kwh. in the year 1944 under average river flow conditions it would have chosen to deliver that to Baltimore at a rate of 1.4 mills per kwh. and continue diverting 92,662,000 kwh. at a rate of 4.3 mills?

[19379] THE WITNESS: This 104,000,000 is from Holtwood resources only.

By MR. MYSE:

Q. Will you answer my question, please? A. I just want to get your question straight first. If Holtwood had had 104,000,000 more energy available from its own generation, and its one-third of Safe Harbor, if the firm loads had remained the same, then it would have had no choice in what to do with it except deliver it to Baltimore or sell it in interchange in Pennsylvania.

Q. Could it not have been used to reduce either the figure of 201,075,000 kwh., appearing in line 8, column 1 of Table V-B, Exhibit 422, or the figure of 92,662,000 kwh. appearing in line 10, column 1 of the same table?

MR. GOLDBERG: I object to that as argumentative. The [19380] witness answered the question, which is highly speculative, to begin with.

TRIAL EXAMINER: Objection is overruled.

THE WITNESS: If Holtwood had had 104,000,000 additional kilowatt hours that would mean that Safe Harbor would have had a proportionate amount in addition, and the backfeed could have been reduced, the diversion might have been reduced and it might not.

By MR. MYSE:

Q. The fact is you just don't know what would have happened under those conditions. A. I told you that in the first place.

[19381] Q. If under average river flow conditions the amount of energy shown by you as backfeed on the 220 kv lines, or the diversion from Baltimore's two-thirds of Safe Harbor, or both, had been reduced under average river flow conditions where there was an additional 104,182,000 kwh available, as you testified, the result would be that on your Table VI, the amount of credit to Baltimore at the rate of 4.3 mills for that energy would have been reduced. Isn't that right?

[19382] THE WITNESS: All that I can say is that if the energy delivered to Baltimore was less there would have been a smaller amount charged to Baltimore.

By MR. MYSE:

Q. And that would have had a material effect upon the amount of total costs which you charged against Baltimore in line 5, Table VI of your Exhibit 422. Isn't that right? A. I don't know about the material effect. The effect of reducing the amount of energy delivered to Baltimore would, of course, reduce the charge to Baltimore, and the amount of reduction--

Q. It would reduce the credit, would it not? You said "charge." A. It would have reduced the energy supplied from outside of Holtwood's system; if the amount was reduced the amount of energy which Baltimore would

be required to furnish would have been less, then the charge, or the credit, rather, which is based on [19383] the amount of energy coming from Baltimore resources would have been less.

Q. As a result of that the weighted average cost of 2.37 mills which you show in Table VI, note 1, would have been reduced under those conditions. Isn't that right?
A. A weighted average cost will be reduced if the higher component of it is reduced.

Q. And that would be the effect under the conditions we have been speaking about. Isn't that right, Mr. Davis?
A. If Baltimore furnished less energy there would be a smaller amount at the 4.3 mills.

Q. Mr. Davis, where did the figure of 4.3 mills come from which you show in footnote 1, Table VI of Exhibit 422? A. That is from the same source of 1944 data which the 4.7 comes from in 1946.

Q. That means, as I understand you, that it comes from a Form 1 report filed by Consolidated Gas Electric Light and Power Company of Baltimore for the year 1944. Is that right? A. That is right.

* * *

[19384] Q. In any event, as I understand your testimony with respect to the 4.7 mills rate, and which is used in your Exhibit 421, like that figure you take no responsibility for the accuracy of the 4.3 mills except to the extent that you take the responsibility for having computed it accurately from whatever data does appear in Consolidated's report. Is [19385] that right? A. That is true.

Q. Will you refer to Table VI-A of Exhibit 422, please?

Am I correct in understanding the figure of \$115,047 which appears in that table as an adjustment of revenue was derived in substantially the same manner as the comparable figure of— A. \$141,777.

Q. \$141,777 appearing in Table VI-A of Exhibit 421?
A. That is correct, exactly the same way.

Q. And the figures have the same meaning? A. Same meaning, transferring the revenue in the way the costs were allocated.

Q. I show you what purports to be a worksheet which has been furnished us with a heading, "Adjustment to Bill to R.R. in Pennsylvania." Is that the worksheet used by you in arriving at the figure of \$115,047? A. That is correct.

Q. For the year 1944? A. That is right.

Q. I note you have written on the year 1944 which did not appear on my photostat. A. That is correct.

* * * *

[19409] Q. Mr. Davis, in figuring your mill rate of 4.3 mills, did you take the net generation appearing on line 12 of that schedule 579 for the Westport, Gould Street and Riverside plants? A. That is right.

Q. You did not take the net generation for the Pratt Street plant? A. No.

Q. And you totaled those three figures and divided them into the total of dollars appearing on line 34 in columns B, C and D. Is that right? A. That is correct.

* * * *

[19412] STANLEY W. ROLAND

DIRECT EXAMINATION

By MR. GOLDBERG:

Q. Have you made a study to determine whether or not the transmission facilities owned by Holtwood and Susquehanna Companies were used for the transmission of electric energy from a state to points outside thereof during the years 1945 and 1946? A. I have.

Q. Do these studies parallel the studies you made and testified to on May 2 and 3, 1946, for 1943 and 1944? A. Yes. The studies that I have made for 1945 and 1946 operations parallel the studies which I made and testified to on May 2 and 3, 1946, regarding 1943 and 1944 operations.

Q. What additional information did you obtain for purposes of your 1945 and 1946 studies? A. Monthly operating, sales, and billing data for the years 1945 and 1946, and data showing meter quantities by hours at various points on the system for certain days during 1946. In a conference with Messrs. Von Eiff and Watchorn of the Holtwood Company, I obtained data on river flow in 1946 and ascertained whether or not there had been any significant [19413] changes in system facilities and operations since my 1944 study.

Q. On transcript page 908 of your testimony, you introduced Exhibit 37, a map entitled "Transmission Lines and Interconnections of the Pennsylvania Water and Power Company and Susquehanna Transmission Company of Maryland." Has the company revised that map? A. Yes. According to the legend on a map bearing the same title and presented through Mr. Spaulding for identification as Exhibit 353, the map which is Exhibit 37 in this proceeding is stated as having been superseded by the map marked Exhibit 353.

Q. At transcript pages 908, 909 and 910, you testified that certain transmission lines shown on Exhibit 37 were owned and operated by Holtwood and Susquehanna. Would your testimony on those pages be any different if you were relating it to Exhibit 353? A. No.

Q. Would your testimony regarding the function of the lines shown on Exhibit 37 be any different if you were relating it to Exhibit 353? A. No.

Q. What are some of the differences, then, between Exhibits 353 and 37? A. Exhibit 353 states that the line which has been referred to in this proceeding as the "Gun-

powder Line" is "used" [19414] by the Baltimore Company, whereas on Exhibit 37 it states that this line is "leased" by the Baltimore Company. Exhibit 37 designates the points shown on the map by a circled "W-1" at Conowingo, Perryville and Takoma Park as "Point of Delivery for Account of Consolidated Gas Electric Light and Power Company of Baltimore"; on Exhibit 353, however, the first two of these three points of interconnection are designated by a circled "V" and are noted as "Interconnection with the Pennsylvania Railroad Company." Exhibit 353 designates the interconnection between Susquehanna and Potomac Electric Power, north of Takoma Park, by a circled "T" and denotes this as "Interconnection with the Potomac Electric Power Company." Other changes and additions were made in Exhibit 353 but none of them appear to be pertinent to my study.

Q. Did Holtwood, during 1945 and 1946, deliver energy to the same companies which you named at transcript pages 910 and 911 of your testimony? A. Yes.

Q. Were such deliveries in 1945 and 1946 made under the same contracts which you named on page 911? A. Yes, excepting that the contract under which deliveries were made to Edison Light and Power Company during 1945 was terminated on December 31, 1945.

Q. Did Holtwood Company receive delivery of electric energy during 1945 and 1946 from the companies you named on [19415] page 912? A. Yes.

Q. Did Susquehanna perform the same character of service in 1945 and 1946 that it did in 1944? A. Yes.

Q. Did Holtwood sell electric energy in 1945 and 1946, as you stated on page 912 that it did in 1944, to Baltimore Company, Pennsylvania Power and Light Company, Philadelphia Electric Company and Metropolitan Edison Company? A. Yes.

Q. Did Holtwood sell electric energy in 1946 under the contracts you named on page 911 to the Baltimore Com-

pany, Pennsylvania Power and Light Company, Philadelphia Electric Company and Metropolitan Edison Company for resale? A. Yes.

Q. Have you examined the billings under those contracts for 1946? A. Yes.

Q. Does Exhibit 353 designate the points at which Holtwood system interconnects with the facilities of the other companies? A. Yes.

Q. Did Holtwood make deliveries of energy in 1946 for the account of Baltimore? A. Yes.

[19416] Q. At what points? A. At points of interconnection of Susquehanna with the Pennsylvania Railroad at Conowingo and Perryville, Maryland, and at a point of interconnection of Susquehanna with Potomac Electric Power Company, northeast of Takoma Park, Maryland.

Q. Have you made studies to determine, for the years 1945 and 1946, the amounts of electric energy transmitted from Pennsylvania over the facilities of Holtwood and Susquehanna across the Pennsylvania and Maryland state lines to points of delivery in Maryland? A. Yes.

Q. Have you made studies to ascertain, for 1945 and 1946, the quantities of energy transmitted over the transmission facilities owned by Susquehanna and Holtwood from the Baltimore-Washington system to the Holtwood system in Pennsylvania? A. Yes.

Q. Upon what information are these studies based? A. They are based on information similar to that obtained for 1944 which was furnished to me by the Holtwood Company at my request.

Q. Have you prepared an exhibit showing the quantities so transmitted for 1945 and 1946? A. Yes.

MR. GOLDBERG: I would like to offer for identification a document entitled "Electric Energy Transfers Across Maryland- [19417] Pennsylvania Boundary over Facilities of Pennsylvania Water and Power Company and Susquehanna Transmission Company of Maryland by Months—Values in Megawatt Hours".

TRIAL EXAMINER: The document referred to may be marked for identification as Exhibit Number 436.

(The document referred to was marked for Identification as Exhibit Number 436.)

By Mr. GOLDBERG:

Q. Referring to Exhibit 436, is that exhibit comparable to Exhibit 38? A. Yes, with the exception of the years covered and the amounts shown, the two exhibits are identical.

Q. Then is it correct to say that the explanation which you gave at transcript pages 917, 918 and 919 regarding Exhibit 38 also applies to Exhibit 436? A. Yes.

Q. On transcript pages 918 and 919, you referred to a one-line diagram entitled "Pennsylvania Water and Power Company One-Line Diagram of Main Metering Points on the Holtwood-Safe Harbor-Baltimore-Washington Inter-connected System," which is Exhibit 39. Did you use that diagram for the same purpose and in the same way for your 1945 and 1946 studies that you did for your 1944 studies? A. Yes.

Q. On page 920, line 19 to page 921, line 14 and referring [19418] to Exhibit 38, you testified as to the amounts of electric energy transmitted across the Pennsylvania-Maryland boundary from Pennsylvania to Maryland and from Maryland to Pennsylvania over the 220 kv circuits. Do the corresponding amounts for 1945 and 1946 appear in Exhibit 436? A. Yes.

Q. On page 921, line 18 to page 922, line 18, you testified as to the amounts of energy transmitted from Holtwood to Highlandtown during each of the years 1943 and 1944; also with respect to the amounts of backfeed over these lines, is that correct? A. Yes.

Q. Do the corresponding amounts transmitted from Holtwood to Highlandtown for 1945 and 1946 appear in Exhibit 436? A. Yes.

Q. Exhibit 436 shows zero as the amount transmitted from Maryland to Pennsylvania over the 66 kv, 25 cycle lines. Can you explain that? A. Yes.

Q. Will you please do so? A. I was advised by the Holtwood Company that its records of monthly transfers of energy over the Highlandtown lines were on a net basis and since the amount of backfeed was relatively small, only one figure representing the net amount delivered to Highlandtown would appear on its records. It is for this reason [19419] that the transfers from Highlandtown to Holtwood appear as zero for each month of 1945 and 1946 on Exhibit 436.

Q. Actually was there backfeed over those lines in 1946? A. Yes. Mr. Spaulding testified at page 17085, line 11, that the net hourly backfeed over those lines totaled 1,673 megawatt hours in 1946.

Q. Have you shown the amount of energy transmitted from Pennsylvania to Maryland and from Maryland to Pennsylvania during 1945 and 1946 over the 220 kv and 66 kv circuits in graphic form? A. I have.

MR. GOLDBERG: I would like to offer for identification a document entitled "Electric Energy Transfers Across the Maryland-Pennsylvania Boundary over Facilities of the Pennsylvania Water and Power Company and Susquehanna Transmission Company of Maryland by Months."

TRIAL EXAMINER: The document referred to may be marked as Exhibit Number 437 for identification.

(The document referred to was marked for Identification as Exhibit Number 437.)

By MR. GOLDBERG:

Q. Is this bar chart similar to Exhibit 40? A. Yes.

Q. Is your explanation of Exhibit 40 on page 926, line 10, to page 927, line 8, applicable to Exhibit 437? A. Yes. [19420]

Q. To what extent was generation at Safe Harbor

and Holtwood hydro greater or less than average in 1946? A. The output of these two plants was greater than average by 31,000,000 kilowatt hours in 1946. Q. I show you Exhibit 216. Did you inquire of the Holtwood Company whether or not this exhibit correctly shows system facilities and connections as of 1946? A. I did.

Q. What were you informed? A. I was informed that no changes were made in system facilities and connections, subsequent to the preparation of Exhibit 216, which would make any significant change in the exhibit.

Q. During 1946, how much energy was transmitted from Conestoga substation across the Pennsylvania-Maryland boundary to Conowingo and Perryville, Maryland? A. During 1946 Holtwood delivered 56,657 megawatt hours to the facilities of the Pennsylvania Railroad at Perryville for the account of Philadelphia Electric Company, since it was for railroad service north of Perryville. Approximately 44,000 megawatt hours of this amount was transmitted from Conestoga over the two circuits designated as P-5 and P-6. The balance of the deliveries at this point for the account of the Philadelphia Electric Company was transmitted over the two circuits from Conestoga, designated as P-7 and P-8, or from [19421] Washington over the Railroad Company's lines.

In 1946 Holtwood transmitted 115,605 megawatt hours to the facilities of the railroad at Conowingo and Perryville over circuits P-7 and P-8 for the account of Baltimore Company.

Q. With respect to the amounts of electric energy which Exhibits 436 and 437 show as being transmitted by the Holtwood system from Pennsylvania to the Baltimore-Washington system in Maryland over the 66 kv circuits during the years 1945 and 1946, where was that energy generated? A. Most of that energy was generated at Holtwood hydro plant.

[19422] Q. With respect to the amounts of electric energy which Exhibits 436 and 437 show as being transmitted by the Holtwood system from Pennsylvania to the Baltimore-Washington system in Maryland, over the 220 kv circuits during 1945 and 1946, where was that energy generated?
A. Most of that energy was generated at the Safe Harbor plant.

Q. With respect to the amounts of electric energy which Exhibits 436 and 437 show as transmitted from the Holtwood system in Pennsylvania to the Baltimore-Washington system in Maryland during 1945 and 1946, was that energy consumed at points outside the state of Pennsylvania?
A. Most, if not all, of that energy was consumed at points outside of Pennsylvania.

Q. With respect to the amounts of electric energy which Exhibits 436 and 437 show was transmitted from Maryland to Pennsylvania during 1945 and 1946, in which state or states was that energy generated? A. That energy was generated in Maryland or in the District of Columbia.

Q. With respect to the amounts of electric energy which Exhibits 436 and 437 show was transmitted from Maryland to Pennsylvania, did you make any studies to ascertain whether or not any of that energy was sold by Holtwood for resale to other electric utility companies in Pennsylvania? [19423] A. Yes, I did.

Q. On page 935, beginning at line 21 and ending at line 6 of page 939, referring to Exhibit 41, you designated the points at which Holtwood sells electric energy to others in Pennsylvania at wholesale for resale. Now, referring to Exhibit 216, is it correct to state that the points of such sales for resale in 1946 were the same as those stated on the pages of your testimony which I have just specified?
A. Yes.

Q. At page 939, line 12 to page 940, line 25, you described the facilities by means of which electric energy, shown on Exhibits 38 and 40, was transmitted from Mary-

land to Pennsylvania, can be transmitted to interconnection points which you described, using Exhibit 41 for reference purposes. Now, then, is it correct to state that this description applies to the energy transfers shown on Exhibits 436 and 437, using Exhibit 216 for reference purposes.

A. Yes.

MR. GOLDBERG: I would like to have marked for identification a document consisting of 32⁸ pages entitled: "Generation and Transmission of Electric Energy on Holtwood-Safe Harbor System and Transmission from Maryland to Holtwood's Resale Customers in Pennsylvania by Hours for 30 Days of 1946."

TRIAL EXAMINER: The document referred to may be marked as Exhibit Number 438 for Identification.
[19424] (The document referred to was marked for Identification as Exhibit Number 438.)

By MR. GOLDBERG:

Q. Did you prepare Exhibit 438? A. It was prepared by me and by my assistants under my direct supervision.

Q. What, in general, does it purport to show? A. Exhibit 438 shows the generation and transmission of electric energy on the Safe Harbor-Holtwood System as well as the amounts of electric energy transmitted from Maryland to Holtwood's resale customers in Pennsylvania during each hour of 30 days in 1946.

Q. Does it show the percentage of energy delivered to Holtwood's resale customers in Pennsylvania which is transmitted from Maryland? A. Yes. That is shown in Columns 14, 17 and 29.

Q. How were the 30 days chosen which you used in your study? A. On March 5, 1947, I called on Mr. Von Eiff, Interconnection Engineer, and Mr. Watchorn, Efficiency Engineer, of the Holtwood Company to discuss with them the matter of obtaining records of hourly watt hour

meter readings at various points on the Holtwood system during 1946. Mr. Von Eiff provided me with blue print copies of tabulations and graphs showing average daily river flow for the Susquehanna River, measured [19425] at Holtwood for the year 1946.

With the aid of these tabulations, and charts, and from an examination of the load dispatcher's log sheets and other data showing sendout from Safe Harbor over the 220 kv and 69 kv circuits, backfeed over the 220 kv circuits and interchange sales by months for 1946, I designated 30 representative days of the year for which I requested that hourly load data at various points on the system be furnished. I designated the week of December 16, which was the week of maximum load on the interconnected system; a week of low river flow in September, namely, September 15 through September 21; three high flow days; and 13 other days during which daily average flows ranged from 10,400 to 25,800 cubic feet per second.

Q. Do you have a tabulation showing Susquehanna River flow for 1946? A. Yes.

MR. GOLDBERG: I would like to offer for identification a document entitled "Pennsylvania Water and Power Company—Susquehanna River Flow—24 Hour Average in Thousand C. F. S."

TRIAL EXAMINER: The document may be marked Exhibit Number 439 for identification.

(The document referred to was marked for identification as Exhibit Number 439.)

By MR. GOLDBERG:

Q. Do you have a graph showing Susquehanna River Flow [19426] for 1946? A. Yes.

MR. GOLDBERG: I would like to offer for identification a document entitled "Daily Discharge Curves—Susquehanna River at Holtwood, Pennsylvania—1946."

TRIAL EXAMINER: The document may be marked as Exhibit Number 440 for identification.

(The document referred to was marked for identification as Exhibit Number 440.)

By MR. GOLDBERG:

Q. Excluding the three high flow days, what was the highest river flow you designated for the remaining 27 days? A. 25,800 cubic feet per second.

Q. During 1946 on how many days was the river flow 25,800 cubic feet per second or less? A. 240 days.

Q. During what months in 1946 did they occur? A. During every month excepting March and June.

Q. Do you consider that energy flows on the Holtwood-Safe Harbor System, during the 27 days on which stream flow was 25,800 cubic feet per second or less, are reasonably representative of energy flows during the 240 days when stream flows were 25,800 cubic feet per second or less? A. Yes.

Q. On transcript page 946, line 22 through page 948, line [19427] 9, you testified with respect to the approximations and possible errors involved in your studies of the amounts of energy transmitted from Maryland to the Holtwood system in Pennsylvania and sold by Holtwood for resale in Pennsylvania. Does your testimony on those pages also apply to your studies for 1946? A. Yes.

Q. On transcript page 948, line 16 to page 956, line 11, and referring to Exhibit 42, you described how you computed the quantities of electric energy, if any, transmitted from Maryland to Pennsylvania Power and Light Company at Donegal Tap and at Lehman Farm, and to Pennsylvania Water and Power Company's Holtwood station, using some particular hour as an example. Does the testimony you gave at those pages also apply to Exhibit 438? A. Yes, with one exception, which is purely a matter of presentation. That is in Exhibit 42, column 12 shows total deliveries to Pennsylvania Power and Light Company via Donegal,

whereas in Exhibit 438, column 12 shows the firm deliveries, and column 12a shows other deliveries to Pennsylvania Power and Light Company via Donegal. The percentage figures shown in column 17, however, apply to the amounts shown in both columns 12 and 12a.

Q. In your studies of energy transfers for the 30 days, did you find hours when all the energy delivered to Pennsylvania [19428] Power and Light Company at Donegal and at Lehman Farm and all the energy delivered to Holtwood via Lehman Farm was transmitted from Maryland? A. Yes.

Q. How many such hours did you find? A. There were 240 hours representing 33 per cent of the total hours in the 30 days when all the energy delivered to Pennsylvania Power and Light Company at Donegal was transmitted from Maryland.

There were 218 hours representing 30 per cent of the total hours when all the energy delivered to Pennsylvania Power and Light Company at Lehman Farm, and 210 hours representing 29 per cent of the total hours, when all the energy delivered to the bus at Holtwood via Lehman Farm, was transmitted from Maryland.

Q. During how many hours of the 30 days did you find that there was no generation by the main 60-cycle generators at Safe Harbor? A. There were 302 such hours representing 42 per cent of the total hours.

Q. During how many hours of the 30 days did you find that all the energy supplied to the 13 kv, 60-cycle bus at Safe Harbor came from Maryland? A. There were 270 such hours representing 38 per cent of the total number of hours in the 30 days.

[19429] Q. Do you find it generally true, with respect to your 1946 study, when the hydro units at Safe Harbor are not generating energy, that energy is transmitted to Safe Harbor from Maryland? A. Yes.

Q. Were there some hours during the 30 days in 1946 when energy was transmitted from Maryland to Safe Har-

bor during the same hours when energy was generated by the main units at Safe Harbor? A. Yes.

Q. At transcript pages 960, line 24 to 966, line 17, you described how you determined the amounts of electric energy transmitted from Maryland to Safe Harbor, during the same hours when energy was generated by main units at Safe Harbor; which was sold to Pennsylvania Power and Light Company at Donegal and Lehman Farm, and what part, if any, was transmitted to the Holtwood bus. Did you employ the same method and assumptions described on those pages in preparing Exhibit 438? A. Yes.

Q. On pages 967, line 10 to 972, line 16, referring to Exhibit 42, you described what happened to the energy transmitted from Maryland to the 13 kv, 60-cycle bus at Holtwood. Does your testimony on those pages also apply to your 1946 study as shown in Exhibit 438? A. Yes. There is one difference of presentation, however, [19430] that should be pointed out. In Exhibit 42, column 31 shows total deliveries to Metropolitan Edison; whereas in Exhibit 438, column 31 shows the firm deliveries and column 31a shows other deliveries to Metropolitan Edison Company. The percentage figure in column 29, however, applies to the amounts shown in both columns 31 and 31a.

Q. During how many hours of the 30 days to which you have referred was electric energy transmitted from Maryland via Safe Harbor and Holtwood to Metropolitan Edison at York; to Pennsylvania Power and Light Company over circuit 18; to Philadelphia Electric Company at Coatesville; and to the 11 kv, 25-cycle bus through the frequency changer? A. Electric energy was transmitted from Maryland via Safe Harbor and Holtwood to Metropolitan Edison Company during 423 hours; to Pennsylvania Power and Light Company over circuit 18 during 351 hours; to Philadelphia Electric Company during 425 hours; and to the 60-cycle end of the frequency changer during 156 hours.

In terms or percentage of total hours in the 30 days, these amounts are 59, 49, 59 and 22 per cent, respectively.

Q. During how many hours of the 30 days was electric energy transmitted from Maryland via Safe Harbor and Holtwood to meet Metropolitan Edison Company's firm demands at York? A. There were 218 such hours representing 30 per cent of the total number of hours in the 30 days.

[19431] Q. On transcript pages 974, line 3 to 976, line 7, you explained how you derived the entries shown in columns 36 through 43 of Exhibit 42. Did you derive the entries in columns 36 through 43 of Exhibit 438 in the same way?

A. Yes.

Q. On pages 976, line 11 to 977, line 23, referring to Exhibit 42, you testified with respect to the amounts of energy transmitted from Maryland to Pennsylvania Power and Light Company over Circuit Number 3 via Safe Harbor and Holtwood. Is the same method you described at those pages applicable to your study shown in Exhibit 438? A. Yes.

Q. During how many hours of the 30 days was some electric energy transmitted from Maryland via Safe Harbor and Holtwood or from Highlandtown to Pennsylvania Power and Light Company over Circuit Number 3? A. There were 226 such hours representing 31 per cent of the total hours in the 30 days. The amounts for some of these hours are very small.

Q. Did you find any hours during the 30 days when electric energy delivered to Pennsylvania Power and Light Company over Circuit Number 3 was electric energy transmitted from Highlandtown over Circuit Numbers 1, 2, 5 and 6? A. Yes. There were 92 such hours representing 13 per cent of the total hours in the 30 days.

[19432] Q. From the study you have made, do Pennsylvania Water and Power Company and Susquehanna Transmission Company of Maryland each own and operate facilities for the transmission of electric energy, which is trans-

mitted from one or more states and consumed at points outside thereof? A. Yes.

Q. Are the amounts of such electric energy so transmitted substantial? A. Yes.

Q. Does the transmission of such substantial amounts occur frequently? A. Yes.

Q. Generally speaking, what are the facilities for the transmission of such energy? A. The substations and transmission lines owned by Holtwood and Susquehanna as shown on Exhibit 353 are used for that purpose.

Q. Does Holtwood sell for resale electric energy so transmitted? A. Yes.

Q. To what companies does Holtwood sell for resale electric energy so transmitted? A. Baltimore Company, Pennsylvania Power and Light Company, Philadelphia Electric Company, and Metropolitan Edison Company.

[19433] Q. Do Holtwood and Susquehanna each own and operate facilities for such sales? A. Yes.

Q. Generally speaking, what are those facilities? A. Those facilities would include the substations and transmission lines owned by Holtwood and Susquehanna, as shown on Exhibit 353, together with metering and other equipment for billing and recording sales.

[19438]

CROSS-EXAMINATION.

By Mr. MYSE:

[19446] Q. Did you ever take a look at the Form 1 report to find out how much the company reported as being delivered to Baltimore Company in the year 1946? A. No, but I have shown in some of my exhibits here how much was delivered to the Baltimore Company. It was sold to them.

Q. You do show in your exhibit some place how much was sold to Baltimore Company, assuming delivery is the sale. A. Yes, I showed how much was delivered over the [19447] Highlandtown lines and what the ~~sold~~out was

over the 220 kv lines from Safe Harbor. Some of that includes losses; losses are included in the figures.

Q. Are you saying all deliveries over those two lines was sold by Holtwood to Baltimore Company? A. I don't know what in a legal sense would be considered a sale, but in my opinion—

Q. I am not asking you in a legal sense but I am asking you in whatever sense you use the word "sell" in your testimony. A. Yes, I would say ~~whatever~~ was delivered to them was sold to them.

Q. In other words, everything which was delivered over the Highlandtown line by Holtwood to Baltimore and everything that was delivered over the 220 kv lines by Holtwood to Baltimore was sold by Holtwood to Baltimore. Is that your testimony? A. Yes.

Q. Are there any other deliveries by Holtwood to Baltimore over any other lines which you consider a sale by Holtwood to Baltimore? A. Yes, over the 132 kv lines, single-phase lines at Conowingo and Perryville.

[19454] Q. Did you consider all of the sales today to Metropolitan Edison Company other than interchange transactions as firm energy transactions? A. Not according to the usual definition of firm energy, but it is firm energy the way it is defined in the contract.

Q. According to the way you would normally consider firm energy transactions do you consider all of the transactions with Metropolitan Edison Company other than interchange transactions as firm energy transactions? A. Not according to the concept of firm energy I have had in the past.

Q. Well, let's have your concept of firm energy in the past. A. The definition which appears in Form 12 and I believe schedule 8, reads, "Firm power is power which is intended to be continuously available to the purchaser."

Q. To that extent, then, some of the energy transactions [19455] with Metropolitan Edison Company other

than interchange transactions are not firm energy. Is that right? A. Not according to that definition which I just gave you. It is a limited type of delivery which is not in conformity with the definition which I just gave you.

Q. Which of the energy supplied to M. E. other than the interchange transactions do you consider not to be a firm energy transaction under the definition you have referred to? A. I presume the energy above the steam line would be considered ordinarily as a firm obligation. The others have strings tied to them. There has to be a certain ratio of hydro and steam generation; it has to be supplied during certain hours. It is not unlimited service, in other words. It has a lot of strings tied to it which ordinarily you do not get with firm commitments in the ordinary sense, as the term is ordinarily used.

Q. Do I understand your testimony to be then, Mr. Roland, that the energy transactions with Metropolitan Edison Company other than the interchange transactions and other than the transactions relating to energy supply above the steam line are the energy transactions which you do not consider to be firm energy transactions within the meaning of the definition to which you have referred in the Form 12 report. Is that right? A. That is my offhand opinion on the thing, yes.

[19456] In my Exhibit 438 I listed it as firm, because that is the way the company designates it, as "firm." I did that in that exhibit.

Q. In other words, you anticipate me a little bit, Mr. Roland.

Exhibit 438, then, insofar as it divides up the energy supplied to Metropolitan Edison Company between interchange and firm, is not in accordance with your understanding of the division which should be made between the energy supplied to Metropolitan Edison Company. Is that right?

THE WITNESS: I haven't given a great deal of thought to that question as to whether or not that is properly designated as firm or interchange; that is the A, B and C energies in the M. E. contract. You asked for my offhand opinion and I gave it.

In accordance with the definition that I gave you the part of that which is shown as firm energy in my opinion would not ordinarily be classified as firm.

By MR. MYSE:

Q. I am asking for your testimony and not what [19457] ordinarily would be done by somebody else. What is your opinion? A. That is what I am giving you.

Q. Then your offhand opinion is what you understand on it, is that right, Mr. Roland? A. Yes. That is all I can do, isn't it?

[19479] Q. Mr. Roland, at page 9 of your proposed testimony you stated that the 30 days used by you in Exhibit 438 were representative of the year, did you not? A. Yes.

Q. How many days out of the 30 did you include in your exhibit in which river flow was 25,800 C. F. S. or lower? If I recollect it was something like 27 out of 30, isn't that right? A. 26 days?

Q. 27. A. Including the 25,800 it would be 27.

Q. That means, does it not, that only the three highest flow days that you used in your Exhibit 438 are days in which the river flow was higher than 25,800 C. F. S.? A. Yes.

[19480] Q. That means you have included in your 30 days some 90 per cent, approximately, of days when the river flow was 25,800 C. F. S. or lower. Isn't that right? A. Yes, and for the reasons that I stated in connection with my Exhibit 42.

Q. Let's hold the reasons and stick to my question. Do you have any idea what the average number of days

are out of the 365 in the year when the river flow is 25,800 C. F. S. or lower? I have a figure of 210 days out of 365, or roughly 58 per cent. Does that help you any?

THE WITNESS: I would believe there would be more days than that when the flow was less than 25,800. I would say that it would be approximately 235 days. I am now using the curve furnished me by the company.

MR. GOLDBERG: Are we trying to ascertain during how many days in 1946 the river flow was 25,800 C. F. S. or less?

MR. MYSE: No. The question was what was the number of days when the river flow is 25,800 C. F. S. or lower under average flow conditions.

THE WITNESS: Under average flow conditions?

By MR. MYSE:

Q. Yes. A. It was 233 days in my count here for 1946 which is [19481] pretty close to an average year.

Q. Well, 233 is roughly what percentage? That would be 60 per cent, wouldn't it? A. Yes, it is fairly close to that.

Q. On an average water-flow year, it would be slightly less than that, isn't that right? A. It depends upon where the deviation from the average occurred, whether it was in the low flows or the high flows. It would be in that neighborhood, however.

Q. Well, that is satisfactory to me. Do you happen to have an average flow duration chart with you? A. I think I have one here.

Q. You can get it off that, can't you? A. About 58 per cent.

Q. As a matter of fact, in your 30 days you included no days in which the river flow was between 26,000 and 65,000 C. F. S. Isn't that right? A. That is right. Three days in which the flow was 30,000 and over. That is all.

Q. None of those days happen to be days in which the river flow is between 26,000 and 65,000 C. F. S. Isn't that correct? A. That is right.

Q. Do you know what the average number of such days would be on an average flow duration chart on the Susquehanna River, [19482] that is days between 26,000 and 65,000 C. F. S.? A. About 100 days.

Q. 100 days out of 365. That gives you roughly 27 per cent, does it not? A. Yes. I had 28 per cent.

Q. What was it in 1946? A. 20 per cent.

Q. The figure of 65,000 C. F. S. represents full power house draft conditions, does it not? A. At Safe Harbor, yes.

Q. When you referred to the week of maximum load on the interconnected system in your testimony on page 9 of your prepared testimony you were there referring to the Area 6 system, were you not? A. Yes.

Q. You were not referring to the Penn Water-Safe Harbor system alone, were you? A. Only to the interconnected system load.

Q. That is the Area 6 system as you know it? A. Including the Pennsylvania customers, yes.

[19487]

J. M. NEWLANDS.

[19488]

DIRECT EXAMINATION.

By MR. HALL:

Q. Mr. Newlands, have you reviewed the facts with reference to the loss of materials and supplies amounting to \$13,033.04 claimed by Penn Water in its original cost determination as shown by Schedule H of Exhibit No. 320? A. Yes.

Q. Did McCall Ferry Power Company take a physical inventory of supplies and materials at December 31, 1908? A. Yes.

Q. What quantity of cement was listed in that inventory? A. 17,246 barrels of Giant and Atlas cement and 18,490 barrels of Union cement.

Q. What was the cost of this cement to McCall Ferry Power Company? A. The Giant and Atlas cement cost \$1.73 a barrel and the Union cement \$1.18 a barrel, or a total cost of \$51,653 for the cement on hand at December 31, 1908.

[19489] Q. What was the balance of the material and supplies account on McCall Ferry Power Company's books at December 31, 1908? A. The balance on the books was \$35,421 at that date.

Q. What entry would be necessary to correct the books to agree with the actual physical inventory of cement at December 31, 1908? A. It would be necessary to reduce the recorded construction costs by \$16,232 and to increase the material and supplies account by the same amount to reflect the return of the unused material to stock.

Q. Was any construction carried on between December 31, 1908, and the date the Receiver was appointed, July 17, 1909? A. No. There had been no construction work since the previous October.

Q. What amount of supplies were charged out from material and supplies account during the period from December 31, 1908, to July 17, 1909? A. Less than \$500.

Q. Was any cement purchased during this period? A. No. There were no construction materials of any kind purchased during this period.

Q. Would the same adjustment of construction costs have been necessary at July 17, 1909, the date the Receiver was appointed for McCall Ferry Power Company, as was necessary [19490] at December 31, 1908, in order to account for the excessive materials charged to construction? A. Yes.

Q. Was this adjustment ever made on the books of McCall Ferry Power Company or any successor? A. No.

Q. Was any part of the 35,736 barrels of cement on hand at December 31, 1908, ever used in construction? A. The Receiver used 7,852 barrels of this old cement during 1909 and charged it to construction at a reduced cost due to its poor quality. Penn Water also used 8,626 barrels of this old cement during the last four months of 1910 and charged it to construction.

Q. Have you, in your original cost determination as reflected in Exhibit 51, allowed as plant costs the charges made to construction by the Receiver and by Penn Water for the portion of the old cement which was actually used in construction during 1909 and 1910? A. Yes.

Q. Have you found any evidence indicating that the balance of the old cement amounting to 19,258 barrels was ever used in construction work? A. No.

Q. Have you found any evidence indicating why the cement was not used? [19491] A. Yes, correspondence indicated that the cement had spoiled.

Q. What adjustment would be necessary to your original cost determination to remove the cost of the unused spoiled cement? A. It would be necessary to decrease the original cost by at least \$16,232, the amount of the difference between the physical inventory of cement at December 31, 1908, and the book balance of the material and supplies account at the same date.

Q. In other words, in order to correctly account for the loss due to deteriorated cement it would be necessary to decrease your recommended original cost allowed by \$16,232 instead of increasing it by \$13,033 as Penn Water now proposes? A. Yes.

Q. When did the deterioration of the cement take place? A. Memoranda in the files indicate it occurred during the delay caused by the suspension of work.

Q. Did the Receiver or Penn Water purchase any Giant and Atlas or Union cement during 1909 or 1910? A. No.

Q. Did you, during your investigation, find any evidence which indicated that the firm of Harvey Fisk & Sons at any time controlled McCall Ferry Power Company?

A. No. I found no such evidence or indication. The correspondence, documents and minutes of both McCall Ferry Power [19492] Company and Susquehanna Contracting Company and other records which I examined indicated only that the Fisk firm, after it came into the financing picture, shared in the control of McCall Ferry Power Company but did not dominate or control it either alone or with the aid of any other interest.

Q. Did the minutes of the Board of Directors or Executive Committee of McCall Ferry Power Company or of Susquehanna Contracting Company indicate in any way that Harvey Fisk & Sons or W. M. Barnum were to manage McCall Ferry Power Company or that they actually did manage the enterprise?

A. No. There is not the slightest indication in any of the contemporary records to that effect. A search of the correspondence and other records disclosed no management activities by the Fisk firm or by W. M. Barnum; nor were there any communications from or to Harvey Fisk & Sons or W. M. Barnum dealing with the management of the project.

Q. What position did Mr. W. M. Barnum hold with McCall Ferry Power Company? A. Mr. W. M. Barnum was a member of the Board of Directors and the Executive Committee of McCall Ferry Power Company. He performed the duties of these positions in common with the other members.

Q. Who was the chairman of the McCall Ferry Power Company Executive Committee? A. There was no formal chairman, but Mr. Dimock, the [19493] president of McCall Ferry Power Company, was by far the most active member of the Committee. He was a member of most of the subcommittees created at various times to investigate particular problems. Reports and communications regarding management activities or problems were addressed to